

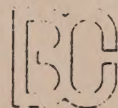
86 02158

12/8/81

# HIGH TECHNOLOGY INDUSTRY SITE STUDY CITY OF SACRAMENTO



SACRAMENTO CITY PLANNING COMMISSION  
JULY 1981



BROWN AND CALDWELL







# BROWN AND CALDWELL

CONSULTING ENGINEERS

86 02158  
D. H. CALDWELL, PE Chairman  
T. V. LUTGE, PE President  
L. B. DUNLAP, PE Exec Vice Pres  
L. N. HOAG, PE Vice Pres

July 30, 1981

Mr. Marty Van Duyn  
Planning Director  
City of Sacramento  
927 Tenth Street  
Sacramento, California 95814

017-861-3

Subject: High Technology Industry Site Study,  
City of Sacramento

Dear Mr. Van Duyn:

Brown and Caldwell is pleased to submit this report of the results of our study of: (1) the site and location factors which are of importance to high technology industries when they select a site for new or expanded facilities, (2) the areas and sites within the city of Sacramento's sphere of influence which are potentially most attractive to high technology industries and which have sufficient available acreage for industrial park development, and (3) a strategy which might be adopted by the City to attract high technology industries.

Our experience in this study indicates great interest amongst high technology industries in making their needs known. There is also considerable interest on the part of these firms in the Sacramento area. An extensive questionnaire was mailed to 891 firms. Detailed responses to this mail survey came from 134 firms of which: (1) 89 indicated plans to expand or relocate in the next five years, (2) 44 indicated they have considered the Sacramento area (Yolo, Placer, and Sacramento Counties) as a potential location, and (3) 12 indicated they have considered the city of Sacramento.

Sacramento has a number of the attributes which are important to high technology firms in selecting a new location; however, it appears that these positive attributes are not well known to the firms. The development strategy presented in our report includes approaches to: (1) promoting the positive attributes of Sacramento and getting information out to firms which are considering relocation, (2) reducing the negative attributes of Sacramento, and (3) providing for necessary transportation and municipal and other utility improvements to make the most attractive of the Sacramento sites available for development.



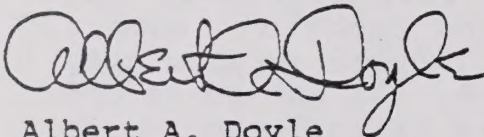
Mr. Marty Van Duyn  
July 30, 1981  
Page two

Nine sites within the city of Sacramento sphere of influence are evaluated in this report. Four are identified as having the greatest potential attractiveness to high technology industry firms. All four sites are in the Natomas/Northgate area. Three sites are within the city and one in the unincorporated area.

Brown and Caldwell has appreciated the opportunity to be of service to the City in this study. We believe that it will be of substantial value in your continuing work to provide sound land use planning at Sacramento. We extend our best wishes for your success in that work.

Very truly yours,

BROWN AND CALDWELL



Albert A. Doyle  
Project Manager

AAD:mjn  
Enclosure



## CONTENTS

LIST OF TABLES .....	iii
CHAPTER 1. INTRODUCTION, SUMMARY, AND CONCLUSIONS .....	1-1
Findings and Conclusions .....	1-1
Principal Location and Site Factors .....	1-1
Market Potential .....	1-2
Most Attractive Areas in Sacramento for High Technology Industrial Development .....	1-3
Development Strategy .....	1-4
CHAPTER 2. MARKET POTENTIAL FOR AND SITE AND LOCATION REQUIREMENTS OF TARGET INDUSTRIES .....	2-1
Study Methodology .....	2-1
Survey .....	2-1
Interviews .....	2-3
Survey and Interview Findings .....	2-4
Summary of Survey Responses .....	2-4
Summary of Interview Responses .....	2-8
CHAPTER 3. SCREENING OF POTENTIAL INDUSTRIAL PARK SITES ...	3-1
First-Stage Screening .....	3-1
Second-Stage Screening .....	3-1
Third-Stage Screening .....	3-2
CHAPTER 4. CHARACTERISTICS OF POTENTIAL INDUSTRIAL PARK SITES .....	4-1
Land Ownership and Use .....	4-1
Site 1 .....	4-2
Site 2 .....	4-5
Site 3 .....	4-8
Site 4 .....	4-8
Site 5 .....	4-10
Site 6 .....	4-11
Site 7 .....	4-13
Site 8 .....	4-14
Site 9 .....	4-15
Transportation .....	4-16
Distance to Nearest Freeway Interchange and Metropolitan Airport .....	4-16
Capacity of Existing Access Roads and Freeway Interchanges .....	4-17
Public Safety Services .....	4-20
Police Protection .....	4-20
Fire Protection Services .....	4-20
Public Utilities .....	4-22
Water Supply .....	4-22



## CONTENTS, continued

Water Quality .....	4-24
Sanitary Sewer Service .....	4-24
Storm Drainage .....	4-28
Electricity .....	4-29
Natural Gas .....	4-31
Telephone Service .....	4-31
Solid Waste Disposal .....	4-32
Hazardous Waste Disposal .....	4-32
Present Site Costs .....	4-33
 CHAPTER 5. RANKING OF POTENTIAL INDUSTRIAL PARK SITES .....	 5-1
Methodology Used in Rating and Ranking Site Factors .....	5-2
Conclusions .....	5-3
 CHAPTER 6. DEVELOPMENT STRATEGY .....	 6-1
Promote Positive Attributes of Sacramento .....	6-1
Reduce Negative Attributes of Sacramento .....	6-3
Provide for Road and Utility Requirements .....	6-5
 CHAPTER 7. MAPS .....	 7-1
 REFERENCES .....	 R-1
 APPENDIX A. SURVEY OF HIGH TECHNOLOGY INDUSTRY LOCATION AND SITE REQUIREMENTS .....	 A-1
 APPENDIX B. INTERVIEW QUESTIONS OF HIGH TECHNOLOGY FIRMS WHO HAVE LOCATED OR CONSIDERED LOCATING IN THE SACRAMENTO AREA .....	 B-1
 APPENDIX C. SURVEY RESULTS OF ALL RESPONDING FIRMS (134 RESPONSES) .....	 C-1
 APPENDIX D. SURVEY RESULTS OF FIRMS WHO HAVE TENTATIVE PLANS TO ESTABLISH A PLANT AT A NEW LOCATION IN THE NEXT FIVE YEARS (89 RESPONSES) .....	 D-1
 APPENDIX E. SURVEY RESULTS OF MARKET POTENTIAL RATING OF THE CITY OF SACRAMENTO BY FIRMS WHO HAVE CONSIDERED THE SACRAMENTO AREA AS A POTENTIAL LOCATION FOR A NEW PLANT SITE (38 RESPONSES) .....	 E-1



## LIST OF TABLES

<u>Number</u>		<u>Page</u>
2-1	Target Industries Surveyed .....	2-2
2-2	Rating of Location and Site Requirements and Market Potential for the City of Sacramento, Summary of Survey Responses .....	2-9
4-1	Land Use Summary .....	4-3
4-2	Site 1 Land Use, Ownerships, and Zoning .....	4-4
4-3	Site 2 Land Use, Ownerships, and Zoning .....	4-6
4-4	Site 6 Land Use, Ownerships, and Zoning .....	4-12
4-5	Site to Nearest Freeway Interchange and Metropolitan Airport, Travel Time, and Distance ....	4-17
4-6	Existing Available Capacities of Access Roads and Nearest Freeway Interchanges .....	4-18
4-7	Impact of 100-Acre Industrial Development on Available Access Road and Freeway Interchange Capacity .....	4-19
4-8	Estimated Existing Raw Land Costs .....	4-33
4-9	Summary of Necessary Off-Site Improvements for a 100-Acre Industrial Park .....	4-34
5-1	Public Safety Services Rating .....	5-2
5-2	Rating and Ranking of Potential Industrial Park Sites .....	5-4
5-3	Rating and Ranking of Potential Industrial Park Sites Based on Implementation-Ability .....	5-5
6-1	Site 1--Off-Site Road and Utility Improvements .....	6-6
6-2	Site 2--Off-Site Road and Utility Improvements .....	6-7
6-3	Site 3--Off-Site Road and Utility Improvements .....	6-8
6-4	Site 4--Off-Site Road and Utility Improvements .....	6-9



## CHAPTER 1

### INTRODUCTION, SUMMARY, AND CONCLUSIONS

This study is focused on three objectives: (1) determine the market potential for high technology industrial development in the city of Sacramento, (2) determine which area or areas within the Sacramento city limits and sphere of influence (Figure 1 in Chapter 7) are most attractive to high technology industries for development of new plant sites, and (3) formulate a development strategy for the city of Sacramento to attract high technology industries.

To accomplish the study objectives, a survey questionnaire was mailed to 891 target industry firms located in the San Francisco Bay Area to determine principal site and location factors and the market potential for Sacramento. Target industries are defined for purposes of this study as high technology industries in the fields of electronics, instruments, and machinery which are laborintensive, growth-oriented, and environmentally clean. In addition to the Bay Area firms contacted by mail, eight firms which have located or considered locating in the Sacramento area were interviewed to determine why they chose or considered this area and the major location factors which attracted them.

### FINDINGS AND CONCLUSIONS

Findings and conclusions are in categories of: (1) principal location and site factors of the industries, (2) market potential for high technology industrial development in Sacramento, (3) most attractive areas in Sacramento for high technology industrial development, and (4) strategy for attracting high technology industries to the city of Sacramento.

#### Principal Location and Site Factors

According to the survey, the most important location and site factors are as follow:

##### Location Factors.

1. Government and public attitudes toward industrial growth
2. Reliability of energy source
3. Availability of skilled labor



4. Housing availability and costs
5. Labor force costs
6. Availability of unskilled or semiskilled labor
7. Quality of primary and secondary schools
8. Electrical energy costs
9. Cultural and recreation activities
10. Availability of truck transportation
11. Proximity to airport with convenient flight schedules
12. College and university research and training capabilities.

#### Site Factors.

1. Reliability of energy source (also a location factor)
2. Site acquisition costs
3. Public safety services (police, fire, etc.)
4. Proximity to airport with convenient flight schedules (also a location factor)
5. Quality of nearby land development
6. Freeway access
7. Contiguous land uses
8. Existing industrial zone district

#### Market Potential

Based on the findings of the survey and interviews, market potential is favorable for the Sacramento area and fair for the city of Sacramento. Forty-four of the 134 survey respondents indicated that they have considered the Sacramento metropolitan area (Yolo, Placer, and Sacramento Counties) as a potential location for a new plant. This represents 33 percent of the total survey response and 5 percent of all firms requested to participate in the survey. However, only 12 firms (9 percent of responding firms) stated that they have considered the city of Sacramento.

Based on the survey results, the attributes of the city of Sacramento which rated highest compared to other potential locations in the United States, included:

1. Quality of life (cultural and recreation activities)
2. Freeway access
3. Housing availability and costs



The major factors which influenced the eight interviewed firms which have located or strongly considered locating in Sacramento or Placer Counties included:

1. Availability of a labor force that is either qualified or highly trainable.
2. Quality of life, which is important to attract and keep employees.
3. Cost of living and housing costs, which also is important to attract and keep employees.
4. Proximity to other industries or location of a service area.

None of the location factors in the city of Sacramento were rated poorly by the survey response. According to the interviews, there were two major limiting factors expressed for attracting high technology industries in the Sacramento area: (1) problems encountered with obtaining permits and (2) poor availability of suitable sites, primarily due to quality of surrounding land uses, lack of nearby residential development, and the monopoly of sites by one developer. Other problems or unfavorable factors mentioned in the interviews included: (1) poor air service due to winter fog and inconvenient flight schedules and (2) quality of life (primarily cultural opportunities, but including air quality and climate).

In the evaluation of utility requirements, it was discovered that Pacific Telephone Company, which serves most of the city of Sacramento, requires up to three years of lead time to plan for and meet the unusual requirements of some research and development firms. The long planning time needed for telephone service of high technology industries engaged in research and development may be a deterrent to this type of firm. However, according to the survey responses, most firms who plan to relocate or expand in the next five years are planning assembly and manufacturing plants which have lesser telephone equipment requirements.

#### Most Attractive Areas in Sacramento for High Technology Industrial Development

To identify potential industrial park sites in the city sphere of influence, a minimum 100-acre site was assumed. This site size is: (1) the average size of industrial park sites in Santa Clara County, (2) from 5 to 12 percent of the combined acreage required by the 89 firms which indicated planned expansion within the next five years, and (3) sufficient to satisfy the combined needs of as many as 30 of these 89



firms. Larger sites are obviously practicable, depending upon Sacramento's expectations as to capture of the market. For example, a 200-acre site would represent 11 to 23 percent of the combined acreage required by the 89 expansion firms and would satisfy the combined needs of as many as 50 of these firms. Sites smaller than the 100-acre minimum are considered too small for the objectives and capabilities at Sacramento. For example, a 50-acre site would represent only 3 to 6 percent of the combined acreage required by the 89 expansion firms and would satisfy the combined needs of less than 10 of these firms.

Nine potential industrial park sites were identified in the following three-step screening process:

1. Identify all existing and potential industrial land in the city sphere of influence.
2. Identify all 100-plus-acre tracts of land within areas identified in Step 1.
3. Eliminate tracts which are subdivided into many parcels and ownerships.

The nine potential sites thus selected were evaluated and compared for land use characteristics, transportation facilities, available public safety services, available utilities, and present site costs. Based on this information, the sites were numerically rated and ranked for six site factors: (1) reliability of energy source, (2) public safety services, (3) proximity to airport, (4) quality of nearby land development, (5) freeway access, and (6) contiguous land uses. According to this ranking, sites located in North and South Natomas and Northgate areas offer the most potential for high technology industrial development. It is noted that this study was limited to an evaluation of potential sites located in the city sphere of influence. Other sites in the Sacramento metropolitan area may also offer good potential for attracting high technology industrial development.

#### Development Strategy

Based on a knowledge of: (1) factors which are important to the target industries in selecting a new site or location and (2) those areas in the Sacramento sphere of influence offering the best potential for attracting these industries, three major strategies are recommended to attract high technology industries to locate in this area. These strategies, which are presented in Chapter 6, deal with:



1. Promotion and enhancement of the local factors which rated high by surveyed and interviewed companies, particularly those factors which have already attracted industries to locate in Sacramento.
2. Minimization or elimination of factors which interviewed companies had problems with or considered unfavorable in the Sacramento area.
3. Planning for and provision of necessary road and utility facilities in the Northgate and Natomas areas.



## CHAPTER 2

### MARKET POTENTIAL FOR AND SITE AND LOCATION REQUIREMENTS OF TARGET INDUSTRIES

This chapter presents the findings of the mail survey and personal interviews.

#### STUDY METHODOLOGY

A mail survey and personal interviews were used to determine the market potential for, and the location and site requirements of new high technology industry plant facilities locating in Sacramento.

##### Survey

A survey questionnaire was mailed to 891 target industry firms located in the San Francisco Bay Area (Alameda, Contra Costa, Santa Clara, San Francisco, and San Mateo Counties). The Bay Area is assumed to be the most likely present location of target industries with potential interest in expanding or relocating to the Sacramento area. It is also reasonable to assume that responses of this survey group on location and site factors are representative of high technology firms in general. The survey questionnaire requested an identification of location and site requirements, a rating of the importance of these requirements, and a rating of locational factors in the city of Sacramento compared to other potential areas in the United States. A copy of the survey is included in this report as Appendix A.

Target industries are defined as high technology industries in the fields of electronics, instruments, and machinery which are labor-intensive, growth-oriented, and environmentally clean. The Standard Industrial Classification (SIC) Manual, prepared by the U.S. Office of Management and Budget, was used to identify specific high-technology industries to be included in the survey. The SIC Manual classifies all United States industries by two-, three-, or four-digit codes, according to the level of industrial detail required. Each digit classification is increasingly more specific. For instance, the two-digit code classifies all United States industries into 20 major groupings, whereas the four-digit code produces 452 industrial classifications. Using the four-digit code, 25 industrial classifications were identified as target industries (Table 2-1). The 25 industrial classifications fall into three major SIC Manual industrial groups: (1) Group 35--machinery except



electrical; (2) Group 36--electrical and electronic machinery, equipment, and supplies; and (3) Group 38--measuring, analyzing, and controlling instruments, photographic, medical and optical goods, watches, and clocks.

Table 2-1. Target Industries Surveyed

SIC code <sup>a</sup>	Industry type	Number of companies in each classification
3559	Special industry machinery not elsewhere classified	11
3573	Electronic computing equipment	111
3574	Calculating and accounting machines, except electronic computing equipment	3
3576	Scales and balances, except laboratory	3
3579	Office machines, not elsewhere classified	11
3581	Automatic merchandising machines	4
3622	Industrial controls	23
3629	Electrical industrial apparatus, not elsewhere classified	9
3661	Telephone and telegraph apparatus	28
3662	Radio and television transmitting, signaling, and detection equipment and apparatus	76
3672	Cathode ray television picture tubes	1
3673	Transmitting, industrial, and special purpose electron tubes	4
3674	Semiconductors and related devices	110
3675	Electronic capacitors	1
3676	Resistors for electronic applications	3
3677	Electronic coils, transformers, and other inductors	12
3678	Connectors for electronic applications	1
3679	Electronic components and accessories not elsewhere classified	514
3699	Electronic machinery, equipment, and supplies not elsewhere classified	5
3811	Engineering, laboratory and scientific, and research instrument and associated equipment	42
3822	Automatic temperature controls	4
3823	Industrial instruments for measurement, displays, and control of process variables and related products	16
3824	Totalizing fluid meters and counting devices	4
3825	Instruments for measuring and testing of electricity and electronic signals	71
3829	Measuring and controlling devices not elsewhere classified	13
Total		1,080 <sup>b</sup>

<sup>a</sup>SIC= Standard Industrial Classification.

<sup>b</sup>Since some companies belong to more than one industrial classification, the total number of companies by classification is greater than the actual number of companies surveyed.



The list of 891 Bay Area firms was compiled based on their being classified by one or more of the 25 SIC codes which identify the target industries. The list of firms was developed from: (1) the 1980 American Electronics Association Membership Directory, (2) the 1980 Industrial Directory for Santa Clara County, and (3) the 1980 Semiconductor Equipment and Materials Institute, Incorporated (SEMI) membership directory. Table 2-1 shows the number of firms classified in each of the 25 SIC codes. Most of the firms are classified as "electronic components and accessories not elsewhere classified" (48 percent), "semiconductors and related devices" (10 percent), and/or "electronic computing equipment" (10 percent).

### Interviews

Eight target industry firms were identified as having located or considered locating in Sacramento or Placer Counties. They include:

1. Coherent, Inc., located in Auburn.
2. Fairchild, which considered the Sacramento area but decided to locate in the state of Washington.
3. GTE Data Center, located in Sacramento (Freeport area).
4. Hewlett-Packard, located in Roseville.
5. PMI Motors, located in Sacramento (Northgate area).
6. Progressive Circuit Products, located in Sacramento (Northgate area).
7. Shugart Associates, located in Roseville.
8. Signetics Corporation, located in Sacramento (Northgate area).

These firms were interviewed to determine the major site and location factors which attracted them to this area. The interviews also addressed certain issues to clarify the results of the mail survey. These issues included compatible land uses and the importance of certain transportation conditions. The list of interview questions is included in this report as Appendix B.

In addition to the eight target industry firms, the California Department of Economic and Business Development and Coldwell-Banker, a local development company, were interviewed to determine what site and location factors are important to target industries which they have dealt with. These two interviews were conducted prior to the formulation of the survey to aid in the development of appropriate questions in the survey.



## SURVEY AND INTERVIEW FINDINGS

The following sections summarize survey and interview findings. Survey tabulations are contained in the Appendices C through E. Detailed results of the interviews are presented in Appendix F which is separately bound.

### Summary of Survey Responses

Of the 891 firms mailed a survey questionnaire, 15 percent or 134 firms responded within the three-week response period. Of the 134 responding firms, 66 percent or 89 firms responded that they have tentative plans to establish a plant at a new location in the next five years. Forty-four firms (33 percent of total responses) reported having considered the Sacramento metropolitan area (Yolo, Placer, and Sacramento Counties) as a potential location for a new plant site.

Three separate tabulations have been made of the 134 survey responses. They include:

1. Survey results of all 134 responding firms (Appendix C).
2. Survey results of the 89 responding firms which have tentative plans to establish a plant at a new location in the next five years (Appendix D).
3. Survey results of market potential rating of Sacramento (Question No. 16 of survey) by the 44 firms who have considered the Sacramento metropolitan area as a potential location for a new plant site (Appendix E).

The three tabulations show the percent of total responses which were reported in each multiple-choice category of each question. No significant differences were noted in the tabulations of responses of all firms as compared to those firms which have tentative plans for relocation.

Responses to each item of the survey are summarized in the following sections. The summarized responses are from the tabulation which is determined to be most appropriate for that question. For instance, responses are summarized from the tabulation of all responding firms (134 respondents) for questions dealing with general information about the industries, such as utility and transportation requirements, compatible land uses, and location preference. Responses are summarized from the tabulation of firms who have tentative plans to relocate (89 respondents) for questions requiring some pre-planning knowledge, such as needed plant site size, number of employees, plant type, and site acquisition costs. The responses to Question No. 16, "Rating of Sacramento compared to other potential locations in the United States," are tabulated



only from responding firms who have considered the Sacramento metropolitan area as a potential location for a new plant site (44 respondents).

Principal Product/Activity. Table 2-1 shows the types of industries receiving the survey questionnaire and the number of companies represented in each industrial classification. There was insufficient response to this fill-in question, both in number and specificity, to draw any conclusions on the relative number of responding firms represented in each industrial category. However, it can be generally concluded that a wide representation of electronic component industries responded to the survey.

Current Number of Employees. Responding firms averaged a relatively high number of employees. Of the 134 responding firms, the mean current number of employees is 1,307 and the median is 75. Of the 89 responding firms with tentative plans for a new plant site, the mean number of current employees is 1,654 and the median is 75.

Question No. 1--New or Expanding Plant. Of the 134 firms responding to the survey, 66 percent indicated they tentatively plan to establish a plant at a new location within the next five years. This response is equal to 7 percent of all the firms receiving a survey form.

Question No. 2--Location Preference. The majority of the 89 respondents prefer to locate a new plant site in an area zoned for light industry with on-site utilities (56 percent) or in a fully planned industrial park with restrictive covenants (36 percent). There would be little demand for locating in an area zoned for heavy industry with or without on-site utilities (8 percent) or in an undeveloped site zoned for light industry (15 percent).

Question No. 3--Size of Plant Site. There is a wide range of acreage requirements for a new plant site. The most preferable size of a plant site is 1 to 4 acres according to 45 percent of the 89 respondents. The remaining 55 percent of respondents were divided about equally in their preferences for sites in the less than 1 acre, 5 to 10 acres, 10 to 20 acres, 21 to 50 acres, and 51 to 200 acres size ranges. Inquiries to local real estate firms indicate average site requirements of 5 acres. Assuming all of the 89 respondents who plan to expand or relocate follow through with their plans, approximately 850 to 1,900 acres will be needed by these firms within the next five years.

Question No. 4--Expected Site Acquisition Cost. Most (37 percent) of the 89 respondents reported that the maximum amount of money they would be willing to pay for land in their

preferred location would be in the range of \$1.50 to \$2.50 per square foot. However, the interviewed firms generally paid over \$2.50 per square foot and considered the cost reasonable.

Question No. 5--Employees. Of the 89 respondents who plan to expand or relocate, 45 percent estimated that between 11 and 100 persons would be employed at a new plant when fully operational. Thirty-six percent of the respondents estimated that between 100 and 500 employees would be needed, and 17 percent responded that over 500 employees would be needed. Assuming all of the tentatively planned new plants are constructed within the next five years, from 13,200 to over 20,600 jobs would be created or relocated to a new area.

Question No. 6--Freeway/Highway Access. Half (51 percent) of the 134 firms responding to the survey reported a need to be located within one mile of a freeway or highway access. According to the interviews, the major reason is ease of access for employees. Since 30 percent of the respondents reported that there was no maximum distance requirement to a freeway or highway interchange, uncongested access to a site is presumed to be a more important factor than distance to a freeway or highway interchange.

Question No. 7--Airport Access. Most (54 percent) of the 134 respondents indicated a need to be located within 30 minutes of an air terminal. Only 21 percent of the firms responded that being located near (within one hour of) an air terminal was not important.

Question No. 8--Proximity to Residential Area. Fifty percent of the 134 responding firms would prefer to locate a new plant site within 5 miles of major residential growth areas, while 34 percent prefer to locate within 10 miles of such areas. The importance of locating a new plant site relatively near growing residential areas was reinforced by the comments of interviewed companies.

Question No. 9--Incompatible Adjacent Land Uses. It is difficult to draw conclusions from the responses to this item because of the large number (23 percent) of "no response" entries on the survey forms. However, it would appear that incompatible adjacent land use may include retail activities, residential, industrial non-manufacturing, transportation, communications, and utilities. Light manufacturing and office activities appear to be compatible uses. The subject of compatible adjacent land uses was addressed in the interviews to clarify these responses. The results of the interviews are discussed later in this chapter.

Question No. 10--Tolerance of Electrical Service Interruptions. Some operations of high technology industries are extremely sensitive to electrical service interruptions.



Seventy percent of the 134 responding firms indicated they could tolerate no more than two electrical service interruptions per year of 30 minutes or less, while 34 percent indicated that they could not tolerate any service interruptions. Subsequent discussions with electrical utility company officials indicate that (1) service interruptions are common, and range in duration from instantaneous to several hours, (2) that two hours per year of service interruption is considered to be representative of a good interruption record for utilities in general, and (3) that power supply and, therefore, electric service reliability in California is typical of the 11 states in the western region because they are gridded together for mutual support on both a regular and emergency basis. Since the majority of high technology industries in the United States are located in California, it is assumed that either emergency electric power supply is provided by the industries in case of a service interruption or that greater electric service interruptions can be tolerated than indicated in the survey.

Question No. 11--Special Utility Requirements. The survey responses to this question are inconclusive in helping assess special utility requirements of target industries. Therefore, these responses are disregarded for purposes of this study. Utility requirements of target industries are determined based on discussions with utility agencies and companies located in Santa Clara and in the Sacramento city and county area. These requirements are discussed in Chapter 4 and are summarized here.

Compared to industrial uses in general, the target industries will require above average service, both in quantity and in special equipment for electricity and telephone. Water and wastewater service is normal except for the production of semiconductors, which requires large amounts of water and disposes of large amounts of wastewater. Some of the target industries will dispose of hazardous wastes. Natural gas service and solid waste disposal will be average or normal.

Question No. 12--Consideration of Sacramento Area. Forty-four firms responded that they have considered the Sacramento metropolitan area (Yolo, Placer, and Sacramento Counties) as a potential location for a new plant. This represents 33 percent of the total survey response and 5 percent of all firms mailed a survey. This response represents a favorable industrial development potential for this area. However, only 12 firms responded that they have considered the city of Sacramento.

Of the 89 respondents who plan to establish a new plant within the next five years, 34 firms (38 percent) have considered the Sacramento metropolitan area and 10 firms (11 percent) have considered the city of Sacramento.

Question No. 13--Plant Type. Approximately 90 percent of those firms planning a new facility in the next five years will set up production and/or assembly. Thirty percent will establish new research and development facilities. Few firms plan to establish new regional or corporate headquarters.

Question No. 14--General Comments. A summary of the general comments is provided in Appendix C.

Questions Nos. 15 and 16--Rating of Location and Site Requirements and Market Potential for the City of Sacramento. The 20 most important site and location factors according to total survey response are listed in Table 2-2 by order of importance. To determine the order of importance, a weighted rating score is assigned to each factor listed in Question No. 15 based on percent response to each importance category. The weighted rating score was calculated as follows:

Percent responding "Very Important" x 2 plus  
 Percent responding "Somewhat Important" x 1 plus  
 Percent responding "Not Important" x 0 equals  
 Weighted Rating Score

Also shown in Table 2-2 are ratings of the city of Sacramento compared to other potential locations in the United States with respect to the 20 most important site and location requirements of target industries. These ratings are taken from survey responses of the 38 firms who have considered the Sacramento area as a potential location for a new plant site.

Analysis of Table 2-2 indicates that many industries which have considered the Sacramento area for a new plant site have a poor knowledge of Sacramento's offering with respect to some of the most important site requirements, particularly government/business relationships, energy cost and reliability, and employee training capabilities. Interviews showed employee training capabilities as a very positive aspect of Sacramento, whereas government/business relationships were viewed poorly.

The three most important location requirements according to the survey are government and public attitudes toward industrial growth, reliable energy source, and availability of skilled labor.

The three most important site requirements are site acquisition costs, public safety services, and proximity to an airport with convenient flight schedules.

#### Summary of Interview Responses

The results of the interviews with (1) eight target industry firms who have located or considered locating in the Sacramento



Table 2-2. Rating of Location and Site Requirements and Market Potential for the City of Sacramento, Summary of Survey Responses

Most important location and site requirements	Weighted rating value <sup>a</sup>	Rating of Sacramento compared to other potential locations in the United States, percent <sup>b</sup>			
		Good	Fair	Poor	Not sure
1. Government and public attitudes toward industrial growth	161	11	26	11	53
2. Reliable energy source	159	24	26	11	37
3. Site acquisition costs	155	29	42	5	21
4. Availability of skilled labor	153	34	39	8	18
5. Housing availability and costs	153	53	32	0	16
6. Labor force costs	149	32	47	5	16
7. Availability of unskilled or semiskilled labor	140	34	39	8	18
8. Quality of primary and secondary schools	140	11	26	11	53
9. Public safety services	139	c	c	c	c
10. Electrical energy costs	134	11	29	11	47
11. Cultural/recreation activities	124	71	18	3	8
12. Availability of truck transportation	120	c	c	c	c
13. Proximity to airport with convenient flight schedules	120	32	26	11	29
14. Quality of nearby land development	110	c	c	c	c
15. Freeway access	106	71	24	0	5
16. Contiguous land uses	102	c	c	c	c
17. Existing industrial zone district	100	c	c	c	c
18. College and university research and training capabilities	98	24	29	3	45
19. Natural gas service	93	c	c	c	c
20. Unemployment rate trend	92	34	39	8	18

<sup>a</sup>Calculated from total response to question number 15 of survey (134 responses).

<sup>b</sup>Response to question number 16 by firms who have considered Sacramento as a potential location for a new plant site (38 responses).

<sup>c</sup>Site specific requirement--not rated on a regional basis.

area, (2) the California Department of Economic and Business Development, and (3) Coldwell-Banker are presented below. The numbers correspond to interview questions listed in Appendix B.

1. Five of the eight companies were considering other communities, both in California and out-of-state when they considered the Sacramento area as a potential plant site.
2. The most important factors which influenced the eight companies to locate in Sacramento or Placer Counties included:
  - a. Availability of labor--4 responses
  - b. Quality of life--3 responses
  - c. Cost of living and housing costs--3 responses
  - d. Proximity to other industries or service area--3 responses
  - e. Government attitude--2 responses
  - f. Cost of electricity--1 response
  - g. Educational opportunities--1 response
3. The perception of the industrial sites in the city of Sacramento was that they were generally fair to poor primarily because of a lack of proximity to residential areas. More than once, comment was expressed regarding the monopoly of sites in Sacramento by one developer.
4. All but one company felt that site acquisition costs in Sacramento were reasonable.
5. An unexpected survey response indicating a general preference for sites zoned for light industry with on-site utilities prompted an interview question about a possible misunderstanding about the term "restrictive covenants." No conclusions can be drawn from the interview responses.
- 6&7. Relation of the sites to freeways/highways was important to two industries interviewed because of visibility of the facility. Location with respect to freeways/highways was generally important to all those interviewed because of the problem of employee access.
- 8&9. Compatible adjacent land uses, according to the industries interviewed, include: (a) office; (b) restaurants, hotels, and motels in moderation; (c) residential uses, especially middle income; and (d) light manufacturing and warehousing.



Incompatible land uses according to the industries interviewed include: (a) railroad, airport, and heavy manufacturing uses which would cause excessive noise, vibration, dust, fumes, or visual impacts; and (b) any use, such as shopping centers, that would cause excessive traffic.

10. Most of the industries interviewed expressed a preference to be located near residential areas. Most were not aware of the planned residential units in South Natomas near the Northgate/I-880 Industrial Area.
11. Labor force quality and availability was generally rated good, particularly for unskilled labor.
12. Energy reliability was generally considered a concern, but electricity costs in the city of Roseville and Sacramento Municipal Utility District (SMUD) service areas are considered favorable compared to electricity costs in the Pacific Gas and Electric Company's service area. Because of data transmission, reliable and quality telephone service is important.
13. Most companies rated government and public attitudes in Sacramento as good. One company related their own experience as poor.
14. The local educational system was rated good.
15. Housing availability and costs were rated as good, but the lack of industrial sites near residential areas in Sacramento was perceived to be a limiting factor.
16. Negative experience or factors encountered by the companies in locating a plant site locally included:
  - a. Problems encountered with obtaining permits--4 responses
  - b. Availability of suitable sites--2 responses
  - c. Air service--2 responses
  - d. Quality of life--2 responses
  - e. Lack of technically trained professionals--1 response
  - f. Cost and reliability of energy--1 response
  - g. High labor costs--1 response

## CHAPTER 3

### SCREENING OF POTENTIAL INDUSTRIAL PARK SITES

Nine sites within the study area have potential for industrial park development. Five of these sites are located in areas presently designated for industrial development by the City and County of Sacramento. Four of the sites are not presently planned for industrial use but are considered by the City Planning Department to offer potential for industrial park development.

The nine potential sites were selected in a three-stage screening process. The first stage identified existing and potential industrial development land within the study area. The second stage identified all vacant land tracts 100 acres or larger within the first-stage areas. After conducting a land ownership study of all second-stage areas, the third stage eliminated areas subdivided into many small ownerships. Further descriptions of the screening process are contained in the following sections.

#### FIRST-STAGE SCREENING

The first-stage screening of potential industrial park sites identified all existing and potential industrial areas within the study area (Figure 2 in Chapter 7). Twelve existing areas were identified from the December 1978, Commercial/Industrial Land Development Study prepared by the Sacramento County Overall Economic Development Committee. Two additional areas were identified as having industrial development potential based on expressed development interest by high technology industries to: (1) local development companies and realtors, (2) city and county planning departments, and (3) the Sacramento Area Commerce and Trade Organization.

#### SECOND-STAGE SCREENING

The second-stage screening of potential industrial park sites identified undeveloped tracts of land within existing and potential industrial areas which are a minimum of 100 acres in size and are unbroken by major streets, highways, or freeways. Rationale for the 100-acre minimum site size criteria is presented in Chapter 1.



The 100-acre minimum vacant land tracts were identified from a vacant land study prepared by City Planning Department staff which was based on aerial photographs taken in May 1980. Due to the importance of aesthetics in high technology industrial park site development, sand and gravel mines north of the Florin Industrial Area and the near-complete City Landfill are not considered suitable and are, therefore, not considered in this study. The vacant tracts were verified in the field. Ten tracts were identified and are shown on Figure 3 in Chapter 7.

### THIRD-STAGE SCREENING

The nine undeveloped tracts of land identified by the second-stage screening process were subsequently evaluated for assessor parcel and ownership patterns based on 1980 Sacramento County Assessor records. Areas which were subdivided into many small parcels of different ownerships were deleted from the study because of the expected difficulty in consolidating numerous separately-owned parcels into a single development. This third-stage screening eliminated one tract of land and portions of one other shown on Figure 3. The nine remaining potential industrial park sites are shown on Figures 4 and 4a.

## CHAPTER 4

### CHARACTERISTICS OF POTENTIAL INDUSTRIAL PARK SITES

This chapter presents the land use characteristics, transportation facilities, available public safety services, distance to nearest utilities, and estimated present site costs for each of the nine potential industrial park sites (see Figures 4 and 4a in Chapter 7). This information is used as a basis for the ranking of sites in Chapter 5 and in the development strategy presented in Chapter 6.

For purposes of comparison, the evaluation of transportation facilities, available public safety services, and available utilities assumes a 100-acre industrial park development at each site. Net acreage, i.e., available land for development after roads and utility easements, is assumed to be 85 acres, or 85 percent of gross acreage. In this chapter, high technology industry is synonymous with target industry, as defined in Chapter 1.

#### LAND OWNERSHIP AND USE

According to the survey and interviews, nearby land uses considered undesirable by target industries included heavy manufacturing uses, airports, railroads, and other industrial uses which have excessive noise, vibration, dust fumes, or low visual quality. Most firms preferred to be located near residential areas (within five miles) to minimize employee commuting distance, but 31 percent of responding firms in the survey considered adjacent residences to be incompatible with high technology industry use. Retail activities such as shopping centers are also considered incompatible because of additional traffic and potential weekend security problems. Restaurants, motels, hotels, and office use are considered compatible nearby uses unless traffic congestion problems result.

An existing industrial zone district is considered moderately important to target industry firms in selecting a new project site. Although the existing general plan, specific plan, and zone districts are presented below for each potential industrial park site, it is noted that the City and the County of Sacramento are both in the process of revising their general plans. One of the purposes of this study is to provide guidance to city and county officials in planning future sites for industrial park development.



Important land use characteristics for the nine potential industrial park sites are summarized in Table 4-1. These characteristics are discussed below for each site. They include existing on-site land use, existing contiguous land use, proposed development, zoning, general plan, community plan, and proximity to the nearest residential growth area. Assessor parcel numbers, acreages, and ownerships are listed for each potential industrial park site.

### Site 1

Site 1 contains approximately 1,310 acres in the North Natomas area of the city of Sacramento. It is bounded by Del Paso Road on the north, Interstate 5 on the east, Interstate 880 on the south, and the Sacramento city (City) limits on the west. Table 4-2 lists, by ownership, all Assessor Parcel (AP) numbers, acreages, zoning, and existing land use in Site 1.

Land Ownership. Site 1 is divided into five major ownerships. Except for the 11-acre Natomas school site, all parcels are in private ownership.

Existing On-Site Land Use. On-site land use is primarily open space and agriculture. Exceptions include a 40-acre mobile home park, a farmhouse, and the Natomas School.

Existing Contiguous Land Uses. Existing land use on all sides of Site 1 is primarily agricultural. Exceptions are a residential subdivision, equipment storage area, and warehouse located west of Site 1 on El Centro Road and the Branstetter (Natomas) Airport and a light industrial park located to the east of Site 1 across Interstate 5.

Proposed Developments. Recent commercial and industrial park development interest has been expressed to the City Planning Department on approximately 450 acres located in the area bordered by the West Drainage Canal, El Centro Road, and Del Paso Road (AP Nos. 225-080-02, 03, 04, 05, 07, 08, 15, 16, 17, and 18).<sup>19</sup> No development plans have been approved for Site 1 by the City Planning Department since the existing zoning and General Plan designations for this site do not permit development at this time.

Zoning. Site 1 is zoned primarily Agricultural. The agricultural zone restricts the use of the land primarily to agriculture. The zone is also an open space zone. Rezoning of the agricultural zone can be considered for urban development which is consistent with the General Plan. Approximately 175 acres of Site 1 is zoned Agricultural-Open Space, which is an exclusive agricultural zone designed for the long-term preservation of agriculture and open space land. This zone

Table 4-1. Land Use Summary

	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9
Primary on-site land use	Vacant	Vacant	Vacant	Vacant	Vacant	Vacant	Vacant	Vacant	Vacant
Primary contiguous land use									
North	Agricultural	Agricultural	Agricultural	Agricultural	Residential	Residential	Industrial	Industrial U.S. Army Depot	Residential
South	Agricultural	Airport Industrial	Agricultural	Residential	Industrial	Residential	Vacant, residential	Vacant, residential	Agricultural
East	Agricultural	Agricultural	Residential	Industrial	Industrial	Airport	Industrial	Mixed-use	Agricultural
West	Agricultural	Agricultural	Agricultural	Agricultural	Agricultural	Residential	U.S. Army Depot	Industrial	Mixed-use
Zoning	Agricultural	Agricultural	Agricultural	Light Industrial	Light Industrial	Agricultural	Heavy Industrial	Heavy Industrial	Residential, office building, agricultural
General Plan	Agriculture- Urban Reserve	Agriculture- Urban Reserve	Agriculture- Urban Reserve	Intensive Industrial	Intensive Industrial	Industrial	Industrial	Industrial	Residential
Community Plan	None	None	So. Natomas	None (County)	None (County)	Robla	None	None	Meadowview
Proximity to residential growth area	Adjacent	Adjacent	Adjacent	Adjacent	1/2 mile	5 miles	3-1/2 miles	3-1/2 miles	1/2 mile



Table 4-2. Site 1 Land Use, Ownerships, and Zoning

Owner	Assessor parcel number(s)	Acres	Zoning	Existing land use
Cal-Four	225-08-02, 03,04,05, 07,08,15, 16,17,18	451	Agricultural	Agriculture, farmhouse
Natomas Union School District	225-080-06	11	Agricultural	Natomas School
Moore, et al	225-080-30, 31,32	113	Agricultural- Open Space	Agriculture
Waller	225-310-06 225-140-13, 14 225-180-03	237	Agricultural	Agriculture
Garden West Association	225-310-07, 08	37	Agricultural	Mobile Home Park
Boyd	225-140-04	5	Agricultural	Agriculture
Sacramento Savings & Loan Association	225-140-18, 19 225-180-04, 05,06,07, 23	254	Agricultural	Agriculture
Witter	225-180-02 225-190-02, 03 225-220-26	200	Agricultural- Open Space	Agriculture
Total		1,308		

Source: 1980-81 Sacramento County Assessor Rolls.

is designed to prevent the premature urban development of land in this category and is applied to land under contract as an agricultural preserve.

Agricultural Preserves. The Moore and Witter properties (approximately 313 acres) are under Williamson Act contracts. The Williamson Act provides tax incentives for lands to remain in agricultural land use and is designed to discourage the premature and unnecessary conversion of agricultural land to urban uses. The basic form of terminating contracts is through nonrenewal, at which time the 10-year contract expiration period begins. Renewal of the Moore agricultural preserve contract was terminated in 1979. Therefore, the Moore property will remain under contract until 1988. The Witter property contract has not yet been terminated. Excluding the Moore and Witter properties, there is sufficient other land (1,000 acres) not under contract in Site 1 available for industrial park development.

General Plan. The City of Sacramento 1974 General Plan designates Site 1 as an Agriculture-Urban Reserve area. The Natomas West Main Drainage Canal is designated as a Major Recreation or Open Space area. The purpose of the Agriculture-Urban Reserve area is to retain the land in agricultural use until contiguous urban growth warrants a change to urban use. According to the 1972 Open Space Element, Agriculture-Urban Reserve areas are to be reviewed for possible reclassification at the time of General Plan updating every five to seven years. Since the City is now revising the General Plan, reclassification of this area is possible within one to two years.

Community Plan. There are no community plans affecting Site 1.

Proximity to Residential Growth Area. The South Natomas community, a 4,100-acre area planned for 23,000 residential units by the year 2020, is located south of (across the Interstate 880 freeway) and adjacent to Site 1.

## Site 2

Site 2 contains approximately 1,470 acres located in the North Natomas area of the city of Sacramento. It is bounded by Del Paso Road on the north, Interstate 5 on the west, Interstate 880 and the Natomas Airport on the south, and the Sacramento city limits on the east.

Land Ownership. As shown in Table 4-3, Site 2 is divided into 10 private land ownerships, six of which are larger than 100 acres.



Table 4-3. Site 2 Land Use, Ownerships, and Zoning

Owner	Assessor Parcel number (s)	Acres	Zoning	Existing land use
Maun	225-060-14, 15,16,17	223	Agricultural	Agriculture
Sacramento Sports Association	225-070-02, 03,10,11, 12,32,33, 35 225-150-12, 13 225-310-04,	433	Agricultural	Agriculture
Bolen	225-070-04, 05	91	Agricultural- Open Space	House, Warehouse
Benvenuti	225-070-07, 09 225-150-01, 03	152	Agricultural	Agriculture
Sacramento Savings & Loan Association	225-140-16, 17 225-150-21	66	Agricultural	Agriculture
Boyd	225-150-10	43	Agricultural	Agriculture
Machado	225-150-22, 23	148	Agricultural	Agriculture
Eufrazia, et al	225-160-01, 07	149	Agricultural	Agriculture
Fong, et al	225-160-10	125	Agricultural	Agriculture
Barandas, et al	225-170-18, 19	38	Agricultural, Flood zone	Agriculture
Total		1,468		

Source: 1980-81 Sacramento County Assessor Rolls.

Existing On-Site Land Use. On-site land use is primarily open space and agriculture. A farmhouse, farm equipment storage area, and warehouse are located south of the intersection of Del Paso and Ernst Roads.

Existing Contiguous Land Uses. Surrounding land use is presently open space and agriculture on the east, north, and west. The Natomas Airport, a light industrial park, and the soon-to-be-abandoned Natomas Wastewater Treatment Plant are located directly south of the site.

Proposed Development. As discussed for Site 1, present city zoning and land use plans do not permit development of the North Natomas area; therefore, no development proposals can be approved at this time. However, commercial and industrial park development interest has been expressed to the City Planning Department on approximately 1,200 acres located between Interstates 5 and 880, Del Paso Road, and the East Drainage Canal. Proposed uses include highway commercial, office buildings, research and development firms, a sports stadium, and light industrial use.<sup>19</sup>

Zoning. Site 2 is zoned primarily Agricultural. As discussed for Site 1, the agricultural zone restricts land use primarily to agriculture and farming. AP Nos. 225-070-04 and -05 are presently under contract as an Agricultural Preserve and are zoned Agricultural-Open Space. The flood zone is applied to AP Nos. 225-170-18 and -19 to reflect flooding along the East Drainage Canal.

Agricultural Preserves. The Bolen property (approximately 91 acres) is under Williamson Act contract. (Refer to Site 1 for discussion of Williamson Act contract.) However, there is sufficient other land in Site 2 (1,380 acres) which is not under contract and therefore potentially available for industrial park development.

General Plan. The City 1974 General Plan designates Site 2 as an Agriculture-Urban Reserve area (refer to Site 1 for definition). The Natomas East Main Drainage Canal is designated as a Major Recreation or Open Space area.

Community Plan. There are no community plans affecting Site 2.

Proximity to Residential Growth Area. The South Natomas community is located south of and adjacent to Site 2. (See discussion of Site 1.)



Site 3

Site 3 contains approximately 180 acres located in the South Natomas area of Sacramento. It is bounded by Interstate 880 on the north, Interstate 5 on the east, the Sacramento city limits on the west, and vacant land on the south.

Land Ownership. Site 3 consists of the following assessor parcels and ownership:

<u>AP Nos.</u>	<u>Owner</u>	<u>Acres</u>
225-230-15, 47	885 Investment Company	178

Existing On-Site Land Use. On-site land use is presently open space.

Existing Contiguous Land Use. Site 2 is surrounded by agricultural land use on the north, west, and south and residential land uses on the east.

Planned Development. The City Planning Department is currently processing an application for a proposed business park (mixed residential and commercial uses) on Site 3. An Environmental Impact Report is being prepared on the proposed development.

Zoning. Site 3 is zoned Agricultural. (Refer to Site 1 for discussion of Agricultural zone district.)

General Plan. The City 1974 General Plan designates Site 3 as Residential. The Natomas Main Drainage Canal is designated as a Major Recreation or Open Space area.

Community Plan. The 1978 South Natomas Community Plan designates most of Site 3 for residential land use. Approximately 40 acres of the site in the vicinity of the intersection of Interstate 5 and West El Camino Avenue are designated for commercial and shopping center use. An elementary-junior high school and fire station are also planned on Site 3.

Proximity to Residential Growth Area. Site 3 is part of and surrounded on the west, south, and east by the South Natomas community, as described for Site 1.

Site 4

Site 4 consists of approximately 360 acres in the Northgate/I-880 Industrial Area of Sacramento. It is located outside of the city limits contiguous to and north of Interstate 880 and approximately 2,500 feet west of Northgate Boulevard.

Land Ownership. Site 4 consists of the following assessor parcels and ownership:

<u>AP Nos.</u>	<u>Owner</u>	<u>Acres</u>
225-160-02, -08,-13,-25	A/A Key Builder Supply, et al.	357

Existing On-Site Land Use. On-site land use is open space.

Existing Contiguous Land Uses. Contiguous land uses are as follow:

1. North--Open space (agriculture)
2. South--Residential
3. East--Industrial manufacturing and nonmanufacturing, particularly warehousing
4. West--Open space (agriculture)

Proposed Development. Site 4 is now being planned for industrial park use. A subdivision map on the site has been approved by Sacramento County for the second phase of Northgate Industrial Park.<sup>20</sup> The first phase of Northgate Industrial Park is under development and is located directly east of Site 4.

Zoning. Site 4 is now zoned for Light Industrial land use by Sacramento County. The Light Industrial zone district permits development of industrial uses which include fabrication, manufacturing, assembly, or processing of materials that for the most part are already in processed form and which do not in their maintenance, assembly, manufacture, or plant operation create smoke, gas, odor, dust, sound, or other objectionable influences. The Light Industrial zone district restricts office use of building space to 25 percent of the total building area. An application is being processed by the County Planning Department to rezone Site 4 to the Industrial Park Zone, a zone which does not place restrictions on office space use.

General Plan. The Sacramento County 1973 General Plan designates Site 4 for Intensive Industrial land use. The stated purpose of this designation is to provide for research, manufacturing, processing, and warehousing of an intensive nature.



Community Plan. There are currently no community plans affecting Site 4.

Proximity to Residential Growth Area. Site 4 is located adjacent to and north of the South Natomas Community, which is described in the Site 1 discussion.

### Site 5

Site 5 contains approximately 131 acres of land in the Northgate/I-880 Industrial Area of Sacramento. It is located outside of the city limits on the southwest quadrant of the intersection of Northgate Boulevard and Del Paso Road.

Land Ownership. Site 5 consists of the following assessor parcels and ownership:

<u>AP Nos.</u>	<u>Owner</u>	<u>Acres</u>
237-011-33,35,36,37,38		
237-012-04	RJB Company	129
237-012-01	B. & N. Scott	2

Existing On-Site Land Use. Site 5 is vacant.

Existing Contiguous Land Use. Contiguous land uses are as follow:

1. North--Residential (low density)
2. South--Industrial manufacturing and nonmanufacturing (primarily warehousing) and vacant
3. East--Transportation and industrial nonmanufacturing
4. West--Open space (agriculture)

Planned Development. Site 5 is being planned for industrial park use (Westgate Industrial Park). Some utilities are being extended onto the site and substantial grading has occurred.

Zoning. Site 5 is zoned Light Industry by Sacramento County. A rezoning application to change zoning to the Industrial Park zone is under consideration by the County Planning Department. (Refer to Site 4 zoning discussion for definitions of these zone districts.)

General Plan. The Sacramento County 1973 General Plan designates Site 5 for Intensive Industrial land use. (Refer to the Site 4 General Plan discussion for definition of this designation.)

Community Plan. There are currently no community plans affecting Site 5.

Proximity to Residential Growth Area. Site 5 is located approximately one-half mile north of the South Natomas community (described in Site 1 discussion).

#### Site 6

Site 6 contains approximately 360 acres west of the McClellan Industrial Area of the city of Sacramento. It is bounded by McClellan Air Force Base on the east, Ascot Avenue on the north, Raley Boulevard on the west, and the eastern extension of Santa Ana Avenue on the south.

Land Ownership. Assessor parcel numbers, ownerships, and acreages for Site 6 are presented in Table 4-4. There is one major land ownership and twelve minor land ownerships in Site 6.

Existing On-Site Land Use. Site 6 is vacant.

Existing Contiguous Land Uses. Contiguous land uses are as follow:

1. North--Residential and vacant
2. South--Residential and vacant
3. East--McClellan Air Force Base
4. West--Residential and vacant

Proposed Development. McClellan Air Force Base is planning to expand into the eastern half of Site 6 (approximately 180 acres) for storage and warehousing. A land swap is presently being negotiated for this land between the City of Sacramento and McClellan Air Force Base.<sup>21</sup>

Zoning. Site 6 is zoned Agricultural by the City of Sacramento (refer to Site 1 for zoning definition). The flood zone district is applied to approximately 40 percent of the site to reflect the presence of the 100-year flood plain.

General Plan. Site 6 is designated for industrial land use by the 1974 City of Sacramento General Plan. The stated purpose of the industrial land use designation is to provide for manufacturing, distribution, warehousing, processing, utilities, heavy transportation, and other kindred uses.

Community Plan. The site is in the Robla Community Plan area (adopted 1965). This site will be included in the North Sacramento Community Plan, which is currently under preparation by the City Planning Department.



Table 4-4. Site 6 Land Use, Ownerships, and Zoning

Owner	Assessor parcel number(s)	Acres	Zoning	Existing land use
Brunello	215-241-08	10	Agricultural	Vacant
Chambers	215-241-10	4	Agricultural	Vacant
Johnson	215-244-09	5	Agricultural	Vacant
Kuhn	215-244-13	5	Agricultural	Vacant
Altman	215-244-14, 15, 17	7	Agricultural	Vacant
Godde, et al	215-244-16 215-243-06 215-244-18	24	Agricultural	Vacant
Paiz	215-271-08	9	Agricultural	Vacant
Hoover	215-241-11	5	Agricultural	Vacant
State of California	215-243-07 215-244-19	5	Agricultural	Vacant
Cooke	215-244-11	8	Agricultural	Vacant
Lindenmeyer, et al	215-244-12	2	Agricultural	Vacant
USA	215-272-06	6	Agricultural	Vacant
P. Garrette	215-241-09 215-242-05 215-243-09 215-244-10 215-271-09 215-272-07	267	Agricultural	Vacant
Total		357		

Proximity to Residential Growth Area. The nearest major residential growth area to Site 6 is the South Natomas community at a distance of approximately five miles.

### Site 7

Site 7 contains approximately 152 acres of land north of the Florin Industrial Area of Sacramento. It is generally bounded by Fruitridge Road on the north, the Central California Traction Company Railroad on the east, Elder Creek Road on the south, and Florin-Perkins Road on the west.

Land Ownership. Site 7 consists of the following assessor parcels and ownerships:

<u>AP No.</u>	<u>Owner</u>	<u>Acres</u>
062-050-01, 02	Florin-Perkins Elder	145
03, 04, 16, 37	Creek Investors	
062-080-01, 02		
03, 04, 05		
062-080-06	Ziegler	1
062-080-07	Levin	6

Existing On-Site Land Use. Site 7 is vacant except for a junkyard on AP No. 062-080-04 (19 acres).

Existing Contiguous Land Use. Contiguous land uses are as follow:

1. North--Heavy industry manufacturing and nonmanufacturing, railroad, and residential
2. South--Vacant and residential
3. East--Railroad, heavy industry manufacturing, and vacant
4. West--U.S. Sacramento Army Depot

Proposed Development. No development plans for Site 7 have been submitted to the City Planning Department.

Zoning. Site 7 is zoned Heavy Industrial (M-2S). This zone requires all uses to be enclosed within a building or within a fence or wall six feet in height. Landscaped setback (25 feet width) is required on all street frontage. The Flood Zone District is applied to approximately one-half of the site which is presently subject to inundation (100-year flood plain).



General Plan. The 1973 City General Plan designates Site 7 for industrial land use (refer to Site 6 for definition).

Proximity to Residential Growth Area. A number of subdivisions (approximately 8 or 9) are currently under construction near Mack Road and Highway 99 at a distance of approximately three to four miles from Site 7.<sup>22</sup>

### Site 8

Site 8 contains approximately 158 acres north of the Florin Industrial Area of Sacramento. It is generally bounded by Elder Creek Road on the north, Florin-Perkins Road on the east, and the Southern Pacific Railroad on the west.

Land Ownership. Site 8 consists of the following assessor parcels and ownership:

<u>AP Nos.</u>	<u>Owner</u>	<u>Acres</u>
064-010-07, 08, 13, 14, 15, 20, 21, 31, 32	Oates	158

Existing On-Site Land Use. Site 8 is vacant.

Existing Contiguous Land Uses. Contiguous land uses are as follow:

1. North--Heavy industry manufacturing, and the U.S. Army Depot
2. South--Vacant and residential
3. East--Vacant, heavy industry manufacturing and non-manufacturing, residential
4. West--Railroad, vacant, and industrial nonmanufacturing

Proposed Development. A subdivision map dividing Site 8 into three parcels intended for future industrial development (Oates Industrial Park) was approved by the City on February 13, 1979. No specific development plans have yet been submitted to the City Planning Department.

Zoning. Site 8 is zoned Heavy Industrial (M-2S) by the City of Sacramento, as defined for Site 7. The Flood Zone is applied to the southern one-third of the site which is subject to inundation (100-year flood plain).

General Plan. The 1973 City General Plan designates Site 8 for industrial land use as defined for Site 6.

Community Plan. Site 8 is not affected by a community plan.

Proximity to Residential Growth Area. Same as for Site 7.

#### Site 9

Site 9 contains approximately 152 acres near the community of Freeport. The site is bounded by the Sacramento city limits on the south and west and by Interstate 5 on the north and east.

Land Ownership. Site 9 consists of the following assessor parcels and ownerships:

<u>AP Nos.</u>	<u>Owner</u>	<u>Acres</u>
052-01-60, 61, 62	City of Sacramento	21
119-01-33	GTE	13
119-01-21, 22	Blumenfeld	39
119-19-01 (portion)	Moss Land Company	40
119-19-02 (portion)	Freeport Land Company	39

Existing On-Site Land Uses. Site 9 is vacant except for the GTE Data Center under construction on AP No. 119-01-33 (13 acres).

Existing Contiguous Land Uses. Contiguous land uses are as follow:

1. North--Residential
2. South--Open space (agriculture) and regional wastewater treatment plant
3. East--Open space (agriculture) and proposed Delta Shores PUD
4. West--Mixed residential-commercial uses, Southern Pacific Company Railroad and Natomas Wastewater Treatment Plant

Proposed Development. The City of Sacramento planned to use AP Nos. 052-01-60, 61, and 62 for a future city water treatment plant at one time. According to the Division of Water and Sewers, the City now plans to use the adjacent Meadowview Wastewater Treatment Plant site for a future water treatment plant after the regional wastewater sanitation system is implemented and the Meadowview plant is phased out in a few years. At that time, the City will most likely offer this land for public sale.<sup>10</sup>



The remaining portion of Site 9 was at one time part of a large planned unit development (Delta Shores), which extended on both sides of Interstate 5. The planned unit development was approved by the Sacramento City Council on June 19, 1979. The portion west of Interstate 5 (which is now Site 9) was withdrawn from the application on May 29, 1979, and was not part of the approved development.

Zoning. The 20 acres owned by the City of Sacramento is zoned Single-Family Residential. The 13-acre GTE Regional Data Center site is zoned Office Building, Planned Unit Development. The remainder of the site is zoned Agricultural.

General Plan. The 1973 City General Plan designates the 20-acre City of Sacramento-owned parcel for Public Use (refer to proposed development discussion). The remainder of the site is planned for residential land use.

Community Plan. Site 9 is part of the 1965 Meadowview Community Plan. Specific uses identified for Site 9 include residential use, commercial use, and a proposed elementary school.

Proximity to Residential Growth Areas. Site 9 is in close proximity to: (1) the existing Pocket community (one-half mile) and (2) the proposed Delta Shores planned unit development.

## TRANSPORTATION

This section identifies, for each potential industrial park site, (1) the distance to the nearest freeway interchange and Sacramento Metropolitan Airport, and (2) the capacity of the existing access road and freeway interchange to serve projected traffic volumes from industrial park development.

### Distance to Nearest Freeway Interchange and Metropolitan Airport

According to the survey, 68 percent of the responding firms prefer to be located within 1-1/2 miles of the nearest major freeway or highway access, while 30 percent of the firms expressed no maximum distance requirements. In addition, slightly more than half the responding firms require a location within 30 minutes travel time from the nearest major air terminal. As shown in Table 4-5, only Sites 8 and 9 exceed 1-1/2 miles in distance from the nearest major freeway interchange, and all sites are located within 30 minutes travel time from the Sacramento Metropolitan Airport.

The distance from a potential industrial park site to the freeway is the distance from the centroid of the site to the nearest existing access road and thence to the nearest full freeway interchange. The travel time from each site to the Sacramento Metropolitan Airport is based on travel speeds on the freeway of between 45 and 55 miles per hour (mph) depending on the location. Travel speeds for surface streets vary between 20 and 40 mph depending on the location. All speeds are assumed for existing traffic conditions during the afternoon peak hour.

Table 4-5. Site to Nearest Freeway Interchange and Metropolitan Airport, Travel Time, and Distance

Site number	Nearest freeway interchange	Distance to nearest existing freeway interchange, miles	Travel time between site and airport, minutes
1	Del Paso Blvd. and I-5	1.5	7
2	Del Paso Rd. and I-5	1.1	7
3	El Camino Rd. and I-880	1.0	10
4	Northgate Blvd. and I-880	1.0	13
5	Northgate Blvd. and I-880	1.0	12
6	Raley Blvd. and I-880	1.3	15
7	Howe Ave. and I-50	3.0	22
8	47th Ave. and Rte. 99	3.0	22
9	Pocket Rd. and I-5	1.3	19

#### Capacity of Existing Access Roads and Freeway Interchanges

The ability of existing transportation systems to handle the projected traffic levels of industrial park development is determined by comparing projected outbound peak-hour trips with available access road and freeway interchange capacity.

Table 4-6 shows, for each potential industrial park site, the existing available capacity of (1) the access road between the site and nearest freeway interchange, and (2) the nearest



freeway interchange. Existing available capacity is determined by subtracting estimated peak-hour outbound traffic volume from existing street and freeway interchange capacity at Level of Service "C". Level of Service "C" is defined as "stable operation; occasionally, drivers may have to wait through more than one red indication; this is suitable operation for urban design purposes."<sup>23</sup>

Table 4-6. Existing Available Capacities of Access Roads and Nearest Freeway Interchanges

1980-81 estimated 24-hour outbound volume			1980-81 estimated peak-hour outbound volume		Level of service "C" capacity <sup>a</sup>		Existing available capacity <sup>b</sup>	
Site no.	Access road	Ramp	Access road	Ramp	Site to freeway	Freeway interchange	Site to freeway	Freeway interchange
1	300	190	30	20	650	1,500	620	1,480
2	300	165	30	20	650	1,560	620	1,540
3	2,500	170	250	20	650	1,560	400	1,540
4	2,500	535	250	60	1,300	1,560	1,050	1,500
5	2,500	535	250	60	1,300	1,560	1,050	1,500
6	4,000	1,200	400	130	650	1,560	250	1,430
7	5,000	6,300	500	690	650	1,500	150	810
8	8,000	1,265	800	140	1,300	1,560	500	1,420
9	1,500	4,150	150	450	650	1,560	500	1,110

Source: City of Sacramento and Caltrans.

<sup>a</sup>Level of Service "C":

Surface street capacity—650 vehicles per lane per hour.

Freeway loop ramp capacity—1,500 vehicles per lane per hour (cloverleaf intersection).

Freeway straight ramp capacity—1,560 vehicles per lane per hour (diamond intersection).

<sup>b</sup>Available capacity is the difference between the 1980-81 estimated peak-hour outbound volume and the Level of Service "C" capacity.

Daily trip generation from a 100-acre (gross) or 85-acre (net) high technology industrial park development is estimated to be 6,545 trips. This projection is based on an average 26.5 employees per net acre and 2.9 daily trips per employee.<sup>1</sup> Assuming afternoon peak-hour trips are 14.5 percent of daily trip generation, afternoon peak-hour trips would be 949, with the outbound trips estimated to be 80 percent of the afternoon peak-hour movement. Therefore, peak-hour traffic is estimated to be 759 trips (80 percent of total afternoon peak-hour trips).

Table 4-7 compares projected outbound peak-hour trips with available access road and freeway interchange capacity (Table 4-6) so that the impact of development for each site can be determined. Table 4-7 also shows the number of gross acres which could be developed at each site without exceeding the available capacity of the existing access road or freeway interchange.

It is noted that future traffic increases from other sources will also diminish available capacities of access roads and freeway interchanges. Consequently, the number of acres of industrial development which could be allowed without exceeding available capacities will decrease from the amounts shown in Table 4-7 as traffic increases occur from other sources. The effect of traffic from sources other than the 100-acre industrial park is particularly important in the case of Sites 1 and 2 which are approximately 1,400 acres each. It should be assumed that development of a 100-acre industrial park on either of these sites would eventually be accompanied by development of the remaining 1,300 acres with a part of the traffic from the other development using the same freeway access. Assuming that such traffic growth would be limited only by the capacity of the freeway interchange, the peak-hour outbound traffic volume on the access road to Sites 1 and 2 (Del Paso Road) could be in the range of 1,500 to 2,500 vehicles per hour.

Table 4-7. Impact of 100-Acre Industrial Development on Available Access Road and Freeway Interchange Capacity

Site No.	Projected outbound peak-hour trips	Available capacity, vehicles per hour <sup>a</sup>		Acres of industrial park development allowed within available capacity <sup>b</sup>
		Site to freeway	Freeway interchange	
1	759	620	1,480	82
2	759	620	1,540	82
3	759	400	1,540	53
4	759	1,050	1,500	138
5	759	1,050	1,500	138
6	759	250	1,430	33
7	759	150	810	20
8	759	500	1,420	66
9	759	500	1,110	66

<sup>a</sup>Does not account for future traffic increases from other sources.

<sup>b</sup>Number of gross acres which could be developed without exceeding the most critical available capacity of either the access road or the freeway interchange. This number is also the percent of a 100-acre industrial park development allowable within the available capacity.



## PUBLIC SAFETY SERVICES

Public safety services ranked ninth in importance among 31 site evaluation factors in the survey (Table 2-2). Public safety services (police and fire) are evaluated for each site in this section.

### Police Protection

According to the City Police Department, police protection can best be provided to potential industrial development sites which (1) offer good access and low traffic congestion, and (2) are located in a low crime area.<sup>12</sup> Good access and low traffic congestion improve police response time, and a low crime area decreases the potential for crime. Higher population density and lower income areas tend to correlate with higher crime risk.<sup>12</sup>

Based on the preceding considerations, the City Police Department rated the nine potential industrial areas in the following order from best to least desirable in terms of police protection: Sites 1, 2, 4, 3, 5, 6, 9, 8, 7. Advantages of Sites 1 through 4 are (1) their proximity to the freeway, which offers quick access for patrol cars as well as providing an effective buffer to pedestrian access, (2) relatively low traffic congestion, and (3) low density surrounding land use. Since Sites 5 and 6 do not have direct freeway access and are located in more densely populated areas, they are rated somewhat lower. Site 9 is rated low because it has limited access, is relatively isolated, and is closer to a higher crime rate area than Sites 1 through 6. Sites 7 and 8 are rated low because (1) traffic is congested on access roads, (2) the surrounding area is highly developed, and (3) both sites abutt a railroad track, which limits police access while providing easier pedestrian access on that side of the site.

### Fire Protection Services

Adequate fire protection for an industrial park development requires (1) adequate water pressure in water lines for fire flow requirements (40 to 50 pounds per square inch) and (2) location within the standard response area of a fire station (1-1/2-mile radius).<sup>13</sup> Availability of water for both fire protection and industrial use is discussed in the section on utilities. Therefore, fire protection services in this section are evaluated only with respect to proximity to nearest existing or planned fire station.

Site 1. The nearest fire station to Site 1 is on North Market Boulevard and South Market Court, approximately three miles east of the site. However, Site 1 will be within the

standard response area of a proposed new fire station on West El Camino Avenue, west of Interstate 5, and one mile from Site 1 (see discussion for Site 3).

Site 2. The nearest fire station to Site 2 is on North Market Boulevard and South Market Court, approximately one mile directly east of the site.

Site 3. A fire station on Peralta and American Avenues serves the developing South Natomas area but is considered inadequate by City fire officials.<sup>13</sup> An interim fire station is planned on Truxel Road and Newborough Drive in the near future which will replace the current Peralta station. A permanent fire station is tentatively planned on Site 3 to be constructed when the area develops. However, the permanent Site 3 station is not yet included in the City's Capital Improvement Program.

Sites 4 and 5. Fire protection services for Sites 4 and 5 are very good as the Natomas Fire Station is within 1/2-mile of both sites.

Site 6. Fire protection for Site 6 is inadequate because the site is well outside of the standard response area of any existing fire station. A future fire station is proposed at Bell Avenue and Marysville Boulevard, approximately 1-3/4 miles from Site 6. Although Site 6 would be outside of the standard response area of that station, City fire officials have stated that the station might provide adequate fire protection for light industrial land use at this site.<sup>13</sup>

Site 7. Adequate fire protection is available for Site 7. The site is in close proximity (within 1/4-mile) of a fire station located at Unsworth Avenue and Florin-Perkins Road.

Site 8. Adequate fire protection is presently available for Site 8. The site is located within 1/2-mile of the fire station at Unsworth Avenue and Florin-Perkins Road.

Site 9. According to City fire officials, a new fire station will probably be necessary to provide adequate fire protection for this site since the nearest fire station is approximately three miles from the site (24th Street and Gardendale). This site is also undesirable from the fire protection standpoint because there is only one access route (Freeport Boulevard) for fire vehicles.<sup>13</sup>



## PUBLIC UTILITIES

Utility requirements of high technology industries include water, sanitary sewers, storm drainage, electricity, gas, telephone, solid waste disposal, and hazardous waste disposal. Based on discussions with local utility agencies and companies, the nine sites are evaluated for service potential. For purposes of this evaluation, the utility requirements of a 100-acre industrial park are assumed at each site, regardless of the total available acreage.

Water Supply

According to the California Department of Water Resources Bulletin 124-2, average water use for electronics industries (Standard Industrial Classification Code 36) is 3,800 gallons/acre/day. Assuming peak use is 2.5 times average water use, peak water use would be 9,500 gallons/acre/day. An estimated 40 to 50 pounds per square inch (psi) of water pressure is needed for fire protection. According to the City Division of Water and Sewers and the Fire Department, a minimum 12-inch water main would be needed to supply industrial and fire protection water requirements, and the fire flow requirement could be as high as 3,500 to 4,000 gallons per minute.<sup>10,13</sup> Fire officials stated that the required 40 to 50 psi could be provided from City water mains at any location in the city.<sup>13</sup>

All of the potential industrial park sites except Sites 3 and 4 are within the service area of the City Division of Water and Sewers. Sites 3 and 4 are in the Northgate/I-880 Water Maintenance District which is administered and operated by the County of Sacramento. Existing and planned water service is evaluated below for each site and necessary off-site improvements for water line extensions are discussed.

Sites 1 and 2. There are no existing or planned water lines to Sites 1 or 2. The nearest city water main capable of providing the required water flows is a 24-inch transmission main which is about to begin construction from the Sacramento River water treatment plant to a point on West El Camino Avenue near Azevedo Drive. According to the City Division of Water and Sewers, this main could potentially be extended north of Interstate 880 to Sites 1 and 2 at substantial cost.

As discussed in the section on the transportation system, it should be assumed that development of a 100-acre industrial park on either Site 1 or Site 2 would be accompanied by other major development on the remaining 1,300 acres of the site.

An alternate source of water for Site 2 would be the county-operated and maintained Northgate-880 Water Maintenance District. The District plans to extend 12-inch water lines to the proposed second phase of Northgate Industrial Park, directly east of Site 2. Additional wells would likely be necessary to meet the increased water demand on this water system if extended to Site 2.

Site 3. The nearest city water main to Site 3 is a 12-inch pipeline now under construction on West El Camino Avenue which will extend westward across Interstate 5 to approximately the city limit line (Natomas Oaks Road). This main will join the new 24-inch main described in the discussion of Sites 1 and 2. The proposed 24-inch main on West El Camino Avenue, on the west side of Interstate 5, will provide sufficient water on-site for industrial park development. According to the City Division of Water and Sewers, the existing water supply for the area is probably sufficient to serve Site 3.<sup>10</sup>

Sites 4 and 5. The Northgate/I-880 Water Maintenance District, which serves the entire Northgate/I-880 Industrial Area, presently provides water in 10- and 12-inch water lines to the existing industrial development on North Market Boulevard, South Market Court, and North Freeway Boulevard. Two wells provide water for the existing development.

Water systems are proposed by the District for Sites 4 and 5, which are in the process of being subdivided for industrial development.<sup>17</sup> Three additional wells are proposed; two on Site 4 and one on Site 5. Twelve-inch lines are proposed in both sites. Water supply for the entire water system (5 wells) is anticipated to be 6,000 gallons per minute (8.6 million gallons per day) and will provide 40 to 65 psi for fire protection.<sup>17</sup> These capacities should be adequate for high technology industrial development.

Site 6. Existing City water lines serving Site 6 do not have sufficient capacity or pressure for high technology industrial park development. The nearest 12-inch water line is located at Linda and Marysville Boulevards, at a distance of approximately two miles. Its water source is from local wells.



There are no plans for extending this line in the direction of Site 6. There is an existing 8-inch water line adjacent to Site 6 on the corner of Ascot Avenue and Raley Boulevard. Another 8-inch water line is located approximately one-half mile south of the site on Main Avenue and Raley Boulevard. The existing water system is not planned to service Site 6, and additional well capacity for industrial park development would be required. However, water quality in local wells may be a deterrent. The City has experienced some well contamination problems recently in this area.<sup>10</sup>

Site 7 and 8. Adequate water supply and pressure is presently available to Sites 7 and 8 from a 12-inch water main on Unsworth Avenue and Thys Court, a 24-inch water main on Florin-Perkins Road, and a 24-inch water main on Elder Creek Road.

Site 9. Water is now provided to Site 9 via a 12-inch City water main which extends to the northern end of the site. No water mains presently extend on-site south of River Road. The City Division of Water and Sewers stated that a dead-end extension of the water line to the southern part of the site would be undesirable, since reliable water supply and pressure for fire flow requirements for a large water-use industrial development could not be guaranteed.<sup>10</sup> Therefore, a second water main, extending from Meadowview Road east of Interstate 5 would probably be necessary.

### Water Quality

Sources of water for the city water system include treated surface water from the Sacramento and American Rivers for most areas and wells for some locations north of the American River. Some city and private wells near McClellan Air Force Base have experienced water quality problems; however, water quality of other wells and of treated surface water in Sacramento is generally very good. Because the long range water plan for Sacramento is to provide treated surface water to all parts of the City sphere of influence, water quality is assumed to be essentially the same for all sites and excellent for high technology industrial use.

### Sanitary Sewer Service

For planning purposes, the Santa Clara City Water Agency estimates that average wastewater flow from industry in the city, which consists primarily of electronics industries, is 2,000 gallons/acre/day. Peak wet weather flow (PWWF) is estimated to be 2.5 times the average flow or 5,000 gallons/acre/day.<sup>9</sup> The flow from a 100-acre industrial park development would require a 10-inch-diameter sewer pipeline assuming no other flow contribution to that line.

Sacramento County Sanitation District No. 1 (CSD1) provides sanitary sewer service to all sites except 1, 2, and 9. Sites 1 and 2 are outside of any sewer service district boundary. Sewer service to Site 9 is provided by the City of Sacramento.

Based on interviews with City and County staff, existing sewer pipeline and pumping station capacities are evaluated in the following sections with respect to PWWF anticipated from an industrial park development of approximately 100 acres at each potential site.

Site 1. Site 1 is located outside of both the present and future CSD1 service boundary and is subject to a sewer service connection limitation. The limitation was imposed by the U.S. Environmental Protection Agency (EPA) on March 14, 1979, in a grant condition on the Step 2 grant award to the Sacramento Regional County Sanitation District (SRCSD) for the design of the Natomas Interceptor System. The condition prohibits new sewer service connections to the Sacramento Regional Wastewater System, or to any other existing or new multiple connection wastewater systems constructed or operated by the grantee (SRCSD), to serve lands within the area of prohibition.<sup>7</sup> The area of prohibition includes the area in Sacramento County north of Interstate 880 and west of East Levee Road, excluding the area north of Interstate 5 and west of El Centro Road, the Northgate/I-880 Industrial Area, and approximately 270 acres which were zoned or in use for uses other than agriculture at the time the grant agreement was made. For the exact boundaries of the prohibition area, refer to Exhibit A of the Subsequent EIR on Natomas Interceptor System, prepared by Sacramento Area Consultants for SRCSD in August 1979. If SRCSD permits any new sewer service connections during the 20-year period following issuance of the Step 2 grant award (March 14, 1979), SRCSD is required to return to the State Water Resources Control Board and EPA, on demand by either agency, all state and federal grant funds plus interest, at the rate of 7 percent per annum from the date of the Step 2 grant award, for the Natomas Interceptor Section 2 and the Natomas Pumping Station.<sup>7</sup> Officials of SRCSD estimate that repayment of the EPA grant would amount to approximately \$4,000,000 at this time.<sup>8</sup> It should be assumed that SRCSD would be unwilling to bear the cost of the grant payback and that such cost would be passed on to the City and/or developers as a condition of sewer service.

An existing 39-inch-diameter sewer trunk, with sufficient capacity to handle flows from a 100-acre industrial park development, is located on San Juan Road between El Centro Road and the Natomas Wastewater Treatment Plant. Because development of Site 1 was assumed to be precluded by the Natomas Interceptor System grant condition, SRCSD's Natomas Interceptor System planning did not include capacity for sewer service to any part of this site. Accordingly, the new Natomas Pumping Station (under construction at the Natomas Wastewater Treatment Plant



site) and the Natomas interceptor system pipelines which connect the Natomas Pumping Station to the SRCSD's Arden Pumping Station (near Cal Expo) are not sized to convey wastewater flows from any development on Site 1. If development occurs on Site 1, either the capacity of the Natomas Pumping Station and Interceptor System would have to be increased, or else the capacity available for development in other portions of the interceptor system service area would have to be correspondingly reduced.

Development of a 100-acre industrial park on Site 1 would result in a need for a 0.5 million gallons per day (mgd) capacity increase in the Natomas Pumping Station. The design capacity of the initial stage of the Natomas Pumping Station is 11.9 mgd with an additional 6 mgd of capacity planned to be added in year 2000. The added service of a 100-acre industrial park on Site 1 would cause the pumping station's initial stage design capacity to be exceeded slightly before year 2000 (perhaps 1998) if other growth in the planned service area is as projected in the SRCSD planning studies.

Other development on Site 1 is almost certain to occur if a 100-acre industrial park is allowed. Similar industrial development of the remaining 1,300 acres of Site 1 could add another 6.5 mgd of wastewater flow to the SRCSD's year 2020 interceptor system planning estimate of 17.9 mgd. If such development occurred at a uniform rate between now and year 2020, and if development in the planned service area followed the SRCSD's planning projections, the Natomas Pumping Station's initial stage design capacity would be exceeded by about year 1993 (seven years earlier than planned). The ultimate (year 2020) design capacity of the pumping station and interceptor force main would be reached in about year 2005. Design capacities of the downstream gravity interceptors extending to the Arden Pumping Station would be reached in about year 2015 (five years in advance of their year 2020 design capacity planning date).

Although the estimated 0.5 mgd of capacity required for a 100-acre industrial park could readily be added in an earlier than planned 1998 capacity increase at the Natomas Pumping Station, service of the entire 1,400-acre Site 1 area would require major expansion of the pumping station as well as a second 15,000-foot-long interceptor force main (about 18 inches in diameter) and 4,500 feet of interceptor gravity sewer. As noted above, this capacity increase could be needed as early as 1993.

Site 2. An existing 24-inch sewer trunk is located along the Natomas East Drainage Canal. Although this trunk would have sufficient capacity for a 100-acre industrial development, Site 2 is subject to the same sewer service connection limitation and

interceptor system capacity problems as discussed for Site 1. Existing capacity of the Natomas Pumping Station and Force Main would be exceeded since they are not designed to serve this area.

Site 3. Existing capacity in the CSD1 trunk sewer serving Site 3 is estimated to be 5,600 gallons/acre/day (PWWF). Since PWWF from an industrial park would be about 5,000 gallons/acre/day, sufficient sanitary sewer capacity is available at this site. This site is in the planned service area of the Natomas Interceptor System and therefore not subject to the several interceptor system capacity problems described for Sites 1 and 2.

Site 4. The existing CSD1 sewer system presently serves Site 4. An 18-inch sewer trunk is located adjacent to Site 4 which can handle approximately 6,600 gallons/acre/day discharge from the 360-acre site. This is more than the 5,000 gallons/acre/day PWWF estimated to be needed for high technology industry. A 30-inch trunk is available for additional capacity within 3,000 feet of Site 4.<sup>8</sup> SRCSD planning for the Natomas Interceptor System is based on a total industrial acreage of 641 acres tributary to the Natomas Pumping Station. The SRCSD industrial flow projections are based on a PWWF of 1,870 gallons/acre/day which is significantly less than the 5,000 gallons/acre/day estimated to be produced by high technology industry. The PWWF capacity allocated to a 100-acre industrial park on Site 4 in the interceptor system planning is thus 0.19 mgd compared to the 0.50 mgd produced by a high technology industrial development. Although a 100-acre high technology industrial park would use significantly more of the interceptor system design capacity than that assumed in SRCSD planning, it is reasonable to assume that other portions of the 641-acre industrial area tributary to the Natomas Pumping Station would use less. Therefore, for purposes of this study, it is assumed that development of a 100-acre industrial park on Site 4 or any other site within the planned service area of the SRCSD's interceptor system will not result in interceptor capacity problems.

Site 5. Site 5 is served by the CSD1 Natomas sanitary sewer system and is within the planned service area of the SRCSD interceptor system. Trunk sewer capacity is limited for Site 5 since only an 8-inch sewer presently serves the site. According to CSD1 staff, additional capacity could be provided for high technology industrial use by extending a trunk to the 48-inch Dry Creek Interceptor. This would require a small (1 mgd) pumping station and approximately 9,400 linear feet of 15-inch pipeline.<sup>8</sup>



Site 6. Site 6 is presently not sewered but is located within the future SRCSD Interjurisdictional Agreement Area, i.e., an area which SRCSD expects to annex in the future. The site is in the planned tributary area of SRCSD's Dry Creek Interceptor, which is located approximately one mile west of the site. A future trunk sewer about 8,000 feet long, connecting the Site 6 area to the Dry Creek Interceptor, is planned by the City. This trunk would have a capacity of approximately 6,000 gallons per acre per day (PWWF). This trunk would provide adequate capacity for a high technology industrial park.

Site 7. Site 7 is provided sanitary sewer service by CSD1 and is located within the proposed Morrison Creek Assessment District. An existing sewer pipeline to the site provides approximately 3,100 gallons/acre (PWWF) design capacity. Additional capacity can be relatively easily acquired through new trunk connection to the Northeast Interceptor located along Elk Grove-Florin Road, approximately 2,000 feet from the site.

Site 8. Site 8 is provided sanitary sewer service by CSD1 and located within the proposed Morrison Creek assessment district. Existing on-site sewer pipeline capacity is 2,100 to 3,100 gallons per day (PWWF). As in the case of Site 7, additional sanitary sewer capacity may be obtained by new trunk connection to the Northeast Interceptor, which is located along Elk Grove-Florin Road, approximately 4,500 feet from Site 8. A small pumping station and force main pipeline would most likely be required to tie into the interceptor.

Site 9. Site 9 is located in the City's Meadowview sewer service area. Existing city sewer lines would be inadequate to handle the projected industrial wastewater flows. However, additional wastewater flows could be connected to the SRCSD's City Interceptor through construction of a 1,000-lineal-foot trunk sewer.

### Storm Drainage

On-site storm drainage facilities would be required for industrial park development at any of the nine sites. The adequacy of existing storm drainage facilities serving each site is evaluated below.

Site 1. There are no existing or planned storm drainage facilities on Site 1. The Natomas West Main Drainage Canal is located along the site's western boundary and could receive storm runoff collected by the site drainage system of a 100-acre industrial park. A new storm drain trunk sewer would be required to convey flow from the 100-acre industrial park to the drainage canal.

Site 2. There are no existing or planned storm drainage facilities on Site 2. The Natomas East Main Drainage Canal is located along the eastern half of the site and could receive storm runoff collected by the site drainage system of a 100-acre industrial park. A new storm drain trunk sewer would be required to convey flow from the 100-acre industrial park to the drainage canal.

Site 3. An existing storm drainage trunk line extends along West El Camino Avenue on the southern boundary of the site and drains into the Natomas Main Drainage Canal. However, additional capacity may be necessary for increased storm runoff.

Sites 4 and 5. Storm drainage facilities are being planned for Sites 4 and 5 as part of the proposed industrial development plans (refer to land use section). A large drainage canal, sized for storm runoff from industrial development, is planned along the northern boundary of the existing Northgate Industrial Park and will drain into the Natomas East Main Drainage Canal.

Site 6. There are no existing or planned storm drainage facilities for Site 6. Present flooding problems limit use of the site. Approximately 40 percent of Site 6 is subject to inundation during a 100-year storm.

Site 7 and 8. Like Site 6, present use of Sites 7 and 8 is limited due to flooding during a 100-year storm. Approximately 50 percent of Site 7 and 30 percent of Site 8 are subject to inundation. Both sites are located in the proposed Morrison Creek Assessment District which has developed preliminary plans for storm drainage facilities on both sites. According to the City Engineer's office, construction of storm sewers may begin as early as spring of 1982.<sup>11</sup>

Site 9. There are private storm sewers on Site 9 north of River Bend Road which drain into the existing on-site drainage canal. According to the City Engineer's office, neither the storm sewers nor drainage canal are designed for industrial runoff and would probably require upgrading.<sup>11</sup>

## Electricity

According to the survey, the availability and reliability of electricity is the most important utility requirement of the target industries and is one of the most important factors overall in selecting a new location for a plant site.

The issues of long-term availability of electricity and major widespread outages are regional in nature. The continued availability of electricity in Northern California is dependent upon new sources of power being developed at a rate commensurate with new demand. Power availability throughout the western



region of the United States has been reduced because of curtailment of construction of generating facilities over the past six years with a resultant reduction in reserves. Power supply in California is typical of the 11 states in the western region, all of whom are gridded together for mutual support on both a regular and emergency basis.

All nine sites are located in the Sacramento Municipal Utility District (SMUD) service area. Local availability of electricity can be affected by the ability of SMUD to provide electrical power to a site within a reasonable time period. Local service reliability can be affected by the amount of transmission lines in an area which can quickly provide alternative backup power to a site. These factors are evaluated for the alternative sites in the following sections.

Availability of Electricity. Electrical requirements of high technology industries are estimated to be 10 watts per square foot of building area<sup>4</sup> or 100 to 120 kilowatts (kw) per gross acre.<sup>5</sup> Assuming an industrial park size of 100 acres, electrical consumption could exceed 10,000 kw at full build-out. Although these estimates represent relatively high electrical energy demand requirements, SMUD officials have stated that SMUD can provide the required electrical power at any of the sites within a reasonable industrial development construction period.<sup>6</sup> According to SMUD officials, no site offers significant implementation or economic advantages or disadvantages over another site related to the provision of electricity for industrial park development.

Electrical Service Reliability. Overall, service interruptions for customers on the SMUD system average one hour per year per customer with two hours per year considered to be representative of a good interruption record for utilities in general.<sup>6</sup> In 1980, SMUD reported a total of 1,393 service interruptions in their District which serves approximately 320,000 customers and encompasses a 750-square-mile area. These interruptions include both scheduled and accidental interruptions ranging in time from instantaneous to up to 8 hours. Service interruptions included 300 scheduled outages and 150 equipment failure outages. The remainder of the outages were of accidental nature related to wind, trees, motor vehicle accidents, and other incidents.

Two directional supply is provided to SMUD customers by the 69,000-volt subtransmission system and the 12,000-volt distribution system. While both of the bidirectional supply systems are manually operated, average response time to service interruptions by SMUD has been 20 minutes. Depending on the particular situation and system configuration at the time of a service interruption, parts of the 69,000-volt subtransmission system response capability is automatic from the central dispatching center.

Generally speaking, the greater the number of distribution lines in an area, the better the response time since more alternative supply lines are available if one is interrupted. Therefore, the total length of outages in remote areas would tend to be greater than in more developed areas. It is noted that water and sewer agencies in the Sacramento area and elsewhere ensure power reliability at critical installations by drawing power from two separate feed lines originating at separate substations. These dual-feed power supplies typically include equipment for automatic and instant switchover from the failed feed to the backup feed. This greatly decreases the dependence upon quick response of crews from the electrical utility.

Based on SMUD outage records over the past three years, SMUD officials rated the nine alternative sites with respect to past outages. The sites ranked as follows: (1) Good--Site 9, (2) Fair--Sites 6, 7, and 8, and (3) Poor--Sites 1, 2, 3, 4, and 5. The history of outages does not necessarily reflect future trends due to changing constituent customers and risk factors to SMUD facilities. However, the outage records do correlate with the observation that longer outages occur in more remote areas.

#### Natural Gas

Natural gas usage by the high technology industries is primarily for space heating and does not, therefore, represent above average industrial requirements. According to a Pacific Gas and Electric Company (PGandE) official, a 4-inch high pressure gas main can most likely provide space heating requirements of an industrial park development.<sup>18</sup> Four-inch or larger high pressure gas mains are presently available at all sites except Sites 1 and 2.

There are no existing or planned gas mains to Sites 1 or 2. The nearest gas main is an 8-inch high pressure main in Truxel Road, which extends as far north as San Juan Road. To extend gas service along San Juan Road to Sites 1 or 2, approximately 1 to 1-1/2 miles of gas main would be required.

#### Telephone Service

In general, telephone service requirements for high technology industries are greater than other industrial uses such as warehousing and heavy manufacturing. High technology industries engaged in research and development generally require between five and nine telephones or special circuits per 1,000 square feet of office space. For comparison, manufacturing industries generally require two telephones or special circuits per 1,000 feet of office space. In addition to a greater number of telephone lines needed per square foot of building



area, the high technology industries often require special circuits or other devices such as data links, direct voice circuits, or alarm circuits.

Sites 1 through 8 would be served by Pacific Telephone Company, and Site 9 would be served by General Telephone Company. Officials of both companies have stated that telephone service can be provided to any of the sites as long as sufficient lead time is given to the telephone company to plan, design, order, and construct the specified telephone equipment.

Pacific Telephone Company officials stated that they would require an accurate forecast of the ultimate telephone service requirements of a firm as much as three years in advance of the actual need. Because of the large number of lines and special equipment required, Pacific Telephone anticipates the necessity for major improvements to the local telephone network, particularly in the Natomas area where existing facilities are sparse. However, the three-year lead period would apply to all sites in their service area (Sites 1 through 8).

General Telephone estimates that normal telephone service can be provided to Site 9 within 90 days and that special equipment requirements can be provided within 6 months. The reasons for the major difference in the lead time requirements of the two telephone companies is unknown.

#### Solid Waste Disposal

Solid waste disposal services can be adequately provided for a high technology industrial park in Sacramento. Non-putrescible wastes, such as those that would be generated by the target industries, may be hauled by private haulers to the County Landfill or by City refuse collection vehicles to the City Landfill (for sites located within the city limits). The City is presently studying alternatives for the City Landfill, which is expected to reach capacity in June or July of 1982. The County Landfill is expected to reach capacity by the year 2004.

#### Hazardous Waste Disposal

Due to the use of toxic chemicals by some electronics industries, there may be some generation of hazardous wastes. According to the survey, 19 percent of the responding industries may require hazardous waste disposal. The availability of a hazardous waste disposal site is a regional location factor for the target industries. According to officials of Hewlett-Packard, a Class I disposal site (disposal site for hazardous wastes) is preferred within one day's round trip haul distance of a plant site.<sup>15</sup> The nearest Class I disposal sites to the city of Sacramento are located in the cities of Benicia,

Martinez, and Richmond; all of which are within a 3- to 4-hour round-trip haul distance. Therefore, hazardous waste disposal requirements of high technology industries located in Sacramento could probably be adequately met by these sites. However, the survey shows that of the few industries which are knowledgeable about hazardous waste disposal in Sacramento (18 firms), 78 percent consider the area to be fair to poor for hazardous waste disposal compared to other potential locations in the United States.

#### PRESENT SITE COSTS

Table 4-8 lists existing site acquisition raw land costs for the nine potential industrial park sites. These costs are estimates provided by Coldwell Banker, a local real estate development company. The costs do not reflect necessary off-site improvements such as access road and freeway interchange improvements, utility extensions and improvements, and off-site storm drainage facilities. The costs also do not reflect on-site road and utility improvements, landscaping, parking, building, and other construction costs. Off-site and building costs will vary for each site depending on the particular off-site improvements needed and the type of building constructed. On-site bond costs for curbs, gutters, streets, and public utilities generally average approximately \$12,000 to \$16,000 per acre for light industrial development<sup>16</sup> but may be somewhat higher for high technology industries.

Table 4-8. Estimated Existing Raw Land Costs

Site	Approximate cost per square foot, dollars
1	2.00 to 3.00 <sup>a</sup>
2	2.00 to 3.00 <sup>a</sup>
3	5.00 to 8.00
4	3.00 to 4.00
5	2.00
6	1.00
7	.75 to 1.50
8	.75 to 1.00
9	2.00

Source: Coldwell Banker

<sup>a</sup>Actual raw land value under the Agriculture-Urban Reserve General Plan designation which exists now is in the range of \$1.00 to \$1.50 per square foot. Tabulated values reflect the effect of General Plan change to a development designation.



Necessary off-site improvements are summarized in Table 4-9. Cost estimates for those facilities which would be financed through the City Capital Improvement Program are presented in the Development Strategy discussion in Chapter 6 of this report. That cost presentation is limited to the top ranked sites identified in Chapter 5.

As shown in Table 4-9, the least off-site improvements needed for industrial park development would be at Sites 3 and 7, and the most off-site improvements would be needed at Sites 1, 2, and 6. The only major off-site improvements needed for Sites 3 and 7 are improved storm drainage facilities and street access to the nearest freeway interchange.

Table 4-9. Summary of Necessary Off-Site Improvements for a 100-Acre Industrial Park

	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9
<u>Water</u>									
Water main extensions, ft <sup>a</sup>	17,000	14,000	-0-	-0-	-0-	11,000	-0-	-0-	2,600
Water source	Adequate	Adequate	Adequate	Adequate	Adequate	Inadequate	Adequate	Adequate	Adequate
<u>Sanitary Sewers</u>									
Trunk sewer extensions, ft <sup>a</sup>	-0- <sup>c</sup>	-0- <sup>c</sup>	-0-	-0- <sup>d</sup>	9,400	8,000 <sup>e</sup>	2,000	4,500	1,000
Pumping station and interceptor <sup>f</sup>	Inadequate <sup>b</sup>	Inadequate <sup>b</sup>	Adequate	Adequate	Adequate	Adequate	Adequate	Adequate	Adequate
Storm Drainage Facilities <sup>a</sup>	Inadequate <sup>b</sup>	Inadequate <sup>b</sup>	Inadequate	Adequate	Adequate	Inadequate	Adequate	Adequate	Inadequate
<u>Natural Gas</u>									
Gas main extensions, ft	8,000	8,000	-0-	-0-	-0-	-0-	-0-	-0-	-0-
<u>Transportation</u>									
Arterial to freeway	Inadequate	Inadequate	Inadequate	Adequate	Adequate	Inadequate	Inadequate	Inadequate	Inadequate
Nearest freeway interchange	Adequate	Adequate	Adequate	Adequate	Adequate	Inadequate	Adequate	Adequate	Adequate

<sup>a</sup>Where a site is substantially larger than 100 acres, the distance is from the site centroid.

<sup>b</sup>Capacity inadequacy becomes severe if development of an industrial park causes entire 1,300-plus-acre area to be developed (see text).

<sup>c</sup>Connection to this line would be subject to \$4 million repayment of Natomas Interceptor System state/federal construction grant.

<sup>d</sup>Capacity of the existing 18-inch trunk sewer serving the site could be supplemented by an additional trunk sewer extended 3,000 feet to an existing 30-inch trunk sewer.

<sup>e</sup>Distance from Site 6 to the SRCSD Dry Creek Interceptor.

<sup>f</sup>Sacramento Regional County Sanitation District regional interceptor system pumping stations and interceptor pipelines.

## CHAPTER 5

### RANKING OF POTENTIAL INDUSTRIAL PARK SITES

According to the survey and interviews, several locational factors make the Sacramento region attractive to high technology industries. These factors include overall quality of life, transportation network, geographic location, labor market, and local colleges and universities.

In this chapter, the nine potential industrial park sites are rated and ranked according to site factors which have been determined to be important to the surveyed and interviewed industries in selecting a new industrial site. The ranking does not consider differences in site acquisition costs, environmental effects, implementation problems such as agricultural preserves and sewer extension limitations, and effects on land use planning. With these factors set aside, the ranking shows which specific areas in the city of Sacramento sphere of influence offer the best potential for high technology industrial park development based on the industry's stated needs.

The nine potential sites are numerically rated and ranked according to the following site factors:

1. Reliable energy source
2. Public safety services (police and fire)
3. Proximity to airport with convenient flight schedules
4. Quality of nearby land development
5. Freeway access
6. Contiguous land uses

These site factors are derived from Table 2-2 which lists the 20 most important site and location factors of high technology industries based on the mail survey of 891 Bay Area high technology industry firms, with 134 firms responding. Excluded from the list of 20 factors are (1) regional factors which are characteristic of the entire Sacramento area, (2) site acquisition costs which, although important, are expected to be a relatively minor portion of the overall development costs, and (3) General Plan and zoning consistency. Necessary off-site municipal and other utility improvements which will affect site development costs are compared for the nine sites in Chapter 4 (Table 4-9). These improvements include facilities, such as arterial streets and water mains, which would be financed through the City Capital Improvement Program. The General Plan and zoning consistency is not included in the ranking because both the City and County of Sacramento are in the process of revising their General Plans.



### Methodology Used in Rating and Ranking Site Factors

Each potential industrial park site is numerically rated for each site factor on a scale of one to five with respect to how well the characteristics of the site meet the criteria of high technology industries. A rating of five indicates the site meets that criteria very well, and a rating of one indicates the site meets that criteria poorly.

The criteria against which site characteristics are rated are based on preferences or requirements of high technology industries expressed in (1) the survey of high technology industry firms, (2) interviews of high technology industry firms, and (3) interviews of public service and utility officials. The criteria, as well as site characteristics are discussed in Chapter 4. Because criteria for adequate police and fire protection (public safety services) are different, these two factors are rated separately for each site and the ratings are averaged for a single public safety service rating (Table 5-1).

Table 5-1. Public Safety Services Rating

Rating	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9
Police protection	5	5	5	5	4	4	1	1	2
Fire protection	4	4	5	5	5	3	5	5	1
Average	4	4	5	5	4	3	3	3	1

To rank the nine potential industrial park sites, a weighting factor is applied to each site factor to reflect the relative degree of importance of each factor and the weighted ratings are added up for each site. The site with the largest numerical total is assumed to be the site offering best potential for industrial park development with respect to the seven site factors. Weighting factors are obtained from the weighted rating values in Table 2-2 and reflect the industries' own rating of the relative importance of the site requirements. The weighting factors are calculated by dividing the Table 2-2 weighted rating values by ten and rounding to the nearest tenth.

## Conclusions

The rating and ranking of potential industrial park sites is presented in Table 5-2. According to this ranking, Sites 1, 2, 3, and 4 offer the best potential and Sites 7 and 8 offer the least potential for high technology industrial development based on the seven rating factors. Differences in ratings for Sites 1, 2, 3, and 4 are minor. The four sites rate the same for reliability of energy source. Sites 3 and 4 rate slightly higher for public safety services because (1) Site 3 is a proposed site for a future fire station and (2) Site 4 is located within 1/2-mile of an existing fire station. Site 4 rates lower than the other three sites for proximity to airport because of a slightly longer travel time. Site 4 rates lower than the other three sites for quality of nearby land development because of its proximity to industrial uses of low scenic value. All four sites rate the same for proximity to freeway. Site 5 rates higher than the other sites for contiguous land uses because it is buffered on two sides by freeways and is surrounded primarily by vacant land on its other two sides.

The only major disadvantage of Sites 1 through 4 is the relatively poor record of power outages compared to other areas in Sacramento. As explained in Chapter 4, the greater number of historical power outages is probably due to the low density of transmission lines in the area, thereby limiting options for backup power during an outage. As more development occurs and more electric transmission lines are extended into the area, the reliability of electric power will improve.

The cost, environmental, and other implementation factors which were set aside in determining the sites most attractive to industry could have an important bearing on the City's final selection of an industrial park site. Although the scope of the consultant's assignment in this study did not include evaluation of these other factors (a proper decision in view of the study objective to find the sites best suited to industry needs), a comparison of the sites based on these other factors is useful and is provided in Table 5-3. Two rating factors are used: (1) private and public dollar cost, which includes raw land value and on-site and off-site improvements with the exception of power supply and natural gas service, and (2) environmental considerations expressed as potential environmentalist opposition to an industrial park at a particular site. These two factors are used to develop an implementation-ability ranking for the nine sites. No relative weighting has been assigned to the environmental considerations and cost factors. The implementation-ability ranking simply reflects the summation of the cost and environmental factor ratings. As with the ratings in Table 5-2, the higher the numerical rating, the more attractive the site. The highest possible rating in Table 5-3 is a ten and the lowest possible is a one.



Table 5-2. Rating and Ranking of Potential Industrial Park Sites Based on Industry Needs

	Reliable energy source	Public safety services <sup>b</sup>	Proximity to airport	Quality of nearby land development	Proximity to freeway	Contiguous land use	Weighted totals	Rank <sup>c</sup>
Weighting factor <sup>a</sup>	1.6	1.4	1.2	1.1	1.1	1.0		
Site 1 Score								
Raw	2.0	4.0	5.0	5.0	4.0	5.0	29.7	2
Adjusted	3.2	5.6	6.0	5.5	4.4	5.0		
Site 2 Score								
Raw	2.0	4.0	5.0	5.0	4.0	4.0	28.7	3
Adjusted	3.2	5.6	6.0	5.5	4.4	4.0		
Site 3 Score								
Raw	2.0	5.0	5.0	5.0	4.0	4.0	30.1	1
Adjusted	3.2	7.0	6.0	5.5	4.4	4.0		
Site 4 Score								
Raw	2.0	5.0	4.0	4.0	4.0	4.0	27.8	4
Adjusted	3.2	7.0	4.8	4.4	4.4	4.0		
Site 5 Score								
Raw	2.0	4.0	4.0	3.0	4.0	3.0	24.3	6
Adjusted	3.2	5.6	4.8	3.3	4.4	3.0		
Site 6 Score								
Raw	3.0	3.0	4.0	2.0	4.0	2.0	22.4	7
Adjusted	4.8	4.2	4.8	2.2	4.4	2.0		
Site 7 Score								
Raw	4.0	3.0	3.0	1.0	1.0	1.0	17.4	8
Adjusted	6.4	4.2	3.6	1.1	1.1	1.0		
Site 8 Score								
Raw	4.0	3.0	3.0	1.0	1.0	1.0	17.4	8
Adjusted	6.4	4.2	3.6	1.1	1.1	1.0		
Site 9 Score								
Raw	5.0	1.0	3.0	4.0	4.0	3.0	24.8	5
Adjusted	8.0	1.4	3.6	4.4	4.4	3.0		

<sup>a</sup>See Table 2-2.<sup>b</sup>See Table 5-1.<sup>c</sup>One equals best potential site.

Table 5-3. Rating and Ranking of Potential Industrial Park Sites Based on Implementation-Ability<sup>a</sup>

Site	Raw land and on-site improvement cost rating <sup>b</sup>	Off-site improvement cost rating <sup>c</sup>	Environmental consideration rating	Implementation-ability rating	Rank <sup>d</sup>
1	3	1	1	5	5
2	3	1	1	5	5
3	1	6	10	17	4
4	2	10	10	22	1
5	3	8	10	21	2
6	7	1	10	18	3
7	6	6	10	22	1
8	6	6	10	22	1
9	3	5	10	18	3

<sup>a</sup>Highest possible rating is 10. Lowest possible is one. The higher the rating, the better the site.

<sup>b</sup>Based on costs which are normally paid by the developer.

<sup>c</sup>Based on costs which may be paid by the City and/or developer.

<sup>d</sup>Best sites are ranked one.

It is not surprising that there are major differences in the implementation-ability rankings in Table 5-3 and the attractiveness to industry rankings in Table 5-2. The differences in the rankings of the top four sites in the two tables are due to a combination of: (1) potential major environmental objections to urbanization of agricultural lands on Sites 1 and 2 and (2) the major off-site costs which would be incurred at Sites 1 and 2 for wastewater facilities grant payback and for water, sewer, storm drainage, and transportation improvements.

The fact that the sites which would be most attractive to industry have a low implementation-ability rating does not mean that implementation would be impossible but only that it would be more difficult and challenging. There would be little apparent value in adoption by the City of an easily implemented industrial park program which does not provide sites which meet industry needs. In such circumstance, the final critical step of implementation (that of obtaining occupants for the industrial park) might never be completed because target industries would find attractive sites in other areas.



## CHAPTER 6

### DEVELOPMENT STRATEGY

Based on a knowledge of (1) factors which are important to the target industries in selecting a new site or location and (2) which areas in Sacramento offer the best potential for attracting these industries, this chapter recommends specific actions that the City of Sacramento can take to attract these industries to locate in Sacramento.

#### Promote Positive Attributes of Sacramento

It is apparent from the survey and interviews that Sacramento has a number of important positive attributes which are attractive to the target industries and which warrant promotion and dissemination of information. According to the interviews of companies who have located or considered locating in the Sacramento area, the most important positive qualities of Sacramento include:

1. Availability of labor
2. Quality of life
3. Cost of living and housing costs
4. Proximity to Bay Area
5. Positive government attitude
6. Cost of electricity
7. Educational opportunities available in local colleges and universities

In addition, according to surveyed companies which have considered locating in the Sacramento area, Sacramento rates well in the following areas:

1. Cultural/recreation activities (quality of life)
2. Freeway access
3. Housing availability and costs
4. Availability and cost of labor force

There is a clear indication of need to spread the word on location factors in Sacramento which companies are particularly uninformed about. The ratings, by the 38 responding firms which have considered Sacramento, of location factors in this city compared to other areas of the United States (see Table 2-2), indicate that a high percentage of firms are unsure about Sacramento with regard to many of the factors. The following tabulation shows the factors for which the information base available to the firms is apparently inadequate or unclear based on 25 or more percent of respondents stating they are unsure.

Importance ranking <sup>a</sup>	Factor	Percentage of respondents who are unsure <sup>b</sup>
1	Government and public attitudes toward industrial growth	53
2	Reliable energy source	37
8	Quality of primary and secondary schools	53
10	Electrical energy costs	47
13	Proximity to airport with convenient flight schedules	29
14	College and university research and training capabilities	45

<sup>a</sup>Factors ranking of importance among the list of 20 factors (see Chapter 2).

<sup>b</sup>Percent of 38 survey respondents who have considered Sacramento as the location for a new plant.

The results of interviews with eight firms who have either considered locating or actually located in the Sacramento area indicate that, in the opinion of these firms, Sacramento compares favorably with other areas with respect to four of these six factors. The two exceptions are: (1) proximity to airport with convenient flight schedules where the convenience of flight schedules is the apparent problem, and (2) the reliability of energy sources.

Develop a Promotional Program. An informational program to compile and disseminate hard facts on Sacramento's many positive attributes with respect to the needs of high technology industry is obviously in order. Although the entire list of 20 factors discussed in Chapter 2 should be included in the program, special attention should be given to developing promotional information which addresses the factors discussed earlier in this section for which the present information is apparently either inadequate or badly presented. A combination of well-designed and placed advertising, backed by a detailed fact sheet could be very productive. Prominent and visible backing of such an effort by the City of Sacramento would be important as a direct showing of a positive government attitude toward high technology industrial growth (the number one factor in importance to these industries as they seek a new location). The above tabulation indicates that companies are uninformed about very important factors in Sacramento, even though they have looked into the area.



## Reduce Negative Attributes of Sacramento

According to the survey (Table 2-2), no factors in Sacramento can be said to have received an overall poor rating. Factors which were considered negative about Sacramento by interviewed companies included: (1) problems encountered with obtaining permits, (2) availability of suitable sites, (3) inconvenient air flight schedules, (4) quality of life (this factor rated high in the survey and by other interviewed companies), (5) lack of technically trained professionals, (6) cost and reliability of energy, and (7) high labor costs.

Following are suggestions to the City of Sacramento to: (1) streamline the permit process and increase the availability of suitable sites, (2) improve educational opportunities for training technicians, and (3) improve the reliability of energy in Sites 1 through 4. The remaining factors are considered beyond the control of the City of Sacramento.

Streamline the Permit Process and Provide Suitable Sites. A number of industries interviewed responded that the permit process was too lengthy and cumbersome. Major permits which may be necessary from the City of Sacramento include: (1) general plan or specific plan amendment; (2) rezoning; (3) subdivision application; and (4) building permit. Although not in itself a permit, the environmental impact study process is on the critical path to permit approval. Clearly, a rubber-stamp permit approval process is contrary to good planning and not desirable. There was no indication by the interviewed industries that they expected Sacramento to shorten the permit process by elimination of steps essential to good planning. The following suggestions are made to shorten or facilitate the local permit process and to improve the availability of suitable sites:

1. Provide in the General Plan an area or areas for target industry development within Sites 1 through 4. Since the target industries did not express a significant desire to locate near other similar industries in a planned industrial park, consideration should be given in the General Plan update to providing for several smaller areas which allow for target industry development. By dispersing these areas, local traffic congestion problems can be alleviated. Planned residential land uses should be considered in the vicinity of these industrial islands to provide nearby homes for employees.
2. Develop a zone district which allows offices, high technology industries, and other clean light manufacturing uses, and limited use of restaurants, hotels, and motels. The zone district should avoid being overly

restrictive while still providing for aesthetically pleasing development and discouraging incompatible land uses. Performance standards addressing noise, dust, visible air emissions (smoke, steam, etc.), outside lighting, outside storage, and other environmental aesthetic factors would be appropriate in such a zone district.

3. Redevelopment of the residential areas east of the Western Pacific Railroad (North Sacramento community area) would provide improved housing in close relation to the top four potential industrial sites which would be in addition to that under construction in the South Natomas Community area. This issue should receive attention in the upcoming revision of the North Sacramento Community Plan. The North Sacramento Community Plan revision should take cognizance of the location of the four potential high technology industrial sites with respect to the community plan area and the possible positive influence of nearby industrial development on the community.
4. Prepare a master EIR for the planned industrial areas, so that if an environmental assessment is required, industries need only assess potential impacts which are specific to their project.
5. One person on City of Sacramento staff should be assigned the responsibility of coordinating all aspects of City activities relevant to City permits and approvals required for new industrial development or expansion of existing industry. The function of this staff position would be to ensure that permit activities move forward as quickly and efficiently as possible. One of the several duties of this position would be to identify all potential permitting problems of an applicant early in the application phase so that the applicant has the maximum possible time to reformulate its proposal and/or take other appropriate actions. The City may wish to consider this staff position as one of several in a Sacramento economic development program.

Provide Local Training for High Technology Industry Technicians. The importance of college and university research and training capabilities was stressed by both survey and interview results. One interviewed company stated that the educational opportunities available in local colleges and universities were one of the most important factors which influenced them to locate in the Sacramento area. On the other hand, one interviewed company remarked that a lack of locally trained technicians and professionals was a negative aspect of Sacramento. College and university research and training



capabilities rated eighteenth in importance out of 31 site and location factors. While half of the surveyed industries which have considered locating in the Sacramento area rated Sacramento fair to good in this respect, compared to other potential locations in the United States, the other half were not sure how Sacramento rated. Because of the importance of college-level technical training opportunities, local colleges and universities should be encouraged to offer course work related to career opportunities in the high technology industries. To ensure that any new curricula developed are consistent with the needs of industry, the local educators should consult with industry training and personnel officers as new courses are formulated and existing courses revised. Retraining of unemployed persons in all levels of the Sacramento labor pool should not be overlooked as local training capabilities are reviewed. While the industries tend to prefer to provide their own labor training, adult education efforts to improve the trainability of the labor pool would have obvious benefits. The fact that one-half of the surveyed industries were unsure about local training opportunities which others believe are fair-to-good underscores the need to improve the dissemination of information on this and other positive Sacramento attributes.

Improve Energy Reliability in Sites 1 through 4. According to the rating of potential industrial park sites in Chapter 5, Sites 1 through 4 offer the best potential for attracting target industries. Local reliability of energy is a concern at all four sites. One interviewed company remarked that energy reliability was a negative factor for locating in the Sacramento area. According to SMUD, regional electrical availability and reliability is characteristic of the 11 western states. However, local power outages are corrected faster in areas containing more distribution lines. Therefore, as the Natomas area develops and more distribution lines are built, length of power outages should decrease. The City of Sacramento can aid in the development of more distribution lines by planning for more intensive land uses in the Natomas area, if such uses are environmentally sound and compatible with long-range planning goals. SMUD would likely follow such a City lead by improving the power distribution grid in the Natomas area.

#### Provide for Road and Utility Requirements

As discussed in Chapter 4, certain off-site road and municipal and other utility improvements would be needed to serve target industry development at Sites 1 through 4. Tables 6-1 through 6-4 list: (1) the necessary utility improvements for each of the four sites; (2) the agency or utility responsible for providing the improvements; and (3) the procedure to provide the improvements. Tables 6-1 through 6-4 contain rough estimates of the cost of needed transportation and water service improvements. It is noted that these estimates

Table 6-1. Site 1--Off-Site Road and Utility Improvements

Road or utility	Improvement needed	Responsible agency or utility <sup>a</sup>	Procedure for providing improvement
Transportation	Widen 1.5 miles of Del Paso Road (I-5 west to city limit) from two to four lanes and provide regional transit service.	City of Sacramento	Provide funding for the widening of Del Paso Road at an estimated cost of \$0.9 million, and encourage Sacramento Regional Transit District to plan for providing transit service to the Northgate-North Natomas area subject to further development in the area. (Note: Under certain conditions, developers may be required to fund part or all of such improvement.)
Water	17,000 feet extension of 24-inch-diameter water line plus additional water wells.	City of Sacramento	Provide funding for improvements. Estimated cost \$2.0 million. (See note under Transportation.)
Sanitary sewers	Increase the capacity of Natomas Interceptor Pumping Station and force main from 3 to 7 years earlier than the year 2000 planned improvement date or provide other improvement to handle peak wet weather flow.	Sacramento Regional County Sanitation District	Repay \$4 million Step 3 grant award to include site in Sacramento County Sanitation District (SRCSD) service area. (Note: It should be assumed that the cost of grant funding repayment would not be borne by the SRCSD but would instead be required to be paid by the City or, in turn, by the developer.)
Storm drainage	Storm drainage collection trunks and conveyance facilities (pipelines and pumping stations) to convey runoff to canals operated and maintained by Reclamation District 1000.	City of Sacramento	Form special assessment district to finance and construct needed facilities. (Note: Assessment may include costs of improvements by Reclamation District 1000 to upgrade the canal system to safely manage the increased runoff.)
Electricity	Extension of 10,000 kw line to site.	Sacramento Municipal Utility District (SMUD)	Company should contact SMUD as early as possible in the planning stage of facility to insure timely utility extension.
Natural gas	1.5-mile extension of 4-inch-high pressure gas main.	Pacific Gas and Electric Company (PG&E)	Company should contact PG&E as early as possible in the planning stage of facility to insure timely utility extension.
Telephone	Extension of telephone lines and provision of special circuits.	Pacific Telephone Company	Company should provide Pacific Telephone Company an accurate forecast of its ultimate telephone service requirements three years prior to actual need.

<sup>a</sup>These agencies or utilities are responsible for providing improvement. Funding may be derived from the responsible agency or in turn from other agencies or developers (see procedure remarks).



Table 6-2. Site 1--Off-Site Road and Utility Improvements

Road or utility	Improvement needed	Responsible agency or utility <sup>a</sup>	Procedure for providing improvement
Transportation	Widen 1.5 miles of Del Paso Road (I-5 west to city limit) from two to four lanes and provide regional transit service.	City of Sacramento	Provide funding for the widening of Del Paso Road at an estimated cost of \$0.9 million, and encourage Sacramento Regional Transit District to plan for providing transit service to the Northgate-North Natomas area subject to further development in the area. (Note: Under certain conditions, developers may be required to fund part or all of such improvement.)
Water	17,000 feet extension of 24-inch-diameter water line plus additional water wells.	City of Sacramento	Provide funding for improvements. Estimated cost \$2.0 million. (See note under Transportation.)
Sanitary sewers	Increase the capacity of Natomas Interceptor Pumping Station and force main from 3 to 7 years earlier than the year 2000 planned improvement date or provide other improvement to handle peak wet weather flow.	Sacramento Regional County Sanitation District	Repay \$4 million Step 3 grant award to include site in Sacramento County Sanitation District (SRCSD) service area. (Note: It should be assumed that the cost of grant funding repayment would not be borne by the SRCSD but would instead be required to be paid by the City or, in turn, by the developer.)
Storm drainage	Storm drainage collection trunks and conveyance facilities (pipelines and pumping stations) to convey runoff to canals operated and maintained by Reclamation District 1000.	City of Sacramento	Form special assessment district to finance and construct needed facilities. (Note: Assessment may include costs of improvements by Reclamation District 1000 to upgrade the canal system to safely manage the increased runoff.)
Electricity	Extension of 10,000 kw line to site.	Sacramento Municipal Utility District (SMUD)	Company should contact SMUD as early as possible in the planning stage of facility to insure timely utility extension.
Natural gas	1.5-mile extension of 4-inch-high pressure gas main.	Pacific Gas and Electric Company (PG&E)	Company should contact PG&E as early as possible in the planning stage of facility to insure timely utility extension.
Telephone	Extension of telephone lines and provision of special circuits.	Pacific Telephone Company	Company should provide Pacific Telephone Company an accurate forecast of its ultimate telephone service requirements three years prior to actual need.

<sup>a</sup>These agencies or utilities are responsible for providing improvement. Funding may be derived from the responsible agency or in turn from other agencies or developers (see procedure remarks).

Table 6-3. Site 3--Off-Site Road and Utility Improvements

Road or utility	Improvement needed	Responsible agency or utility <sup>a</sup>	Procedure for providing improvement
Transportation	Widen 1 mile of El Camino Avenue from two to four lanes and provide regional transit service.	City of Sacramento	Provide funding for the widening of El Camino Avenue at an estimated cost of \$0.6 million and encourage Sacramento Regional Transit District to plan for providing transit service to the Northgate-North Natomas area subject to further development in the area. (Note: Under certain conditions, developers may be required to fund part or all of such improvement.)
Water	No improvements needed.		
Sanitary sewers	No improvements needed.		
Storm drainage	Storm drainage collection trunks and conveyance facilities (pipelines and pumping stations) to convey runoff to canals operated and maintained by Reclamation District 1000.	City of Sacramento	Form special assessment district to finance and construct needed facilities. (Note: Assessment may include costs of improvements by Reclamation District 1000 to upgrade canal system to safely manage increased runoff.)
Electricity	Extension of 10,000 kw line to site.	Sacramento Municipal Utility District (SMUD)	Company should contact SMUD as early as possible in the planning stage of facility to insure timely utility extension.
Natural gas	No improvements needed.		
Telephone	Extension of telephone lines and provision of special circuits.	Pacific Telephone Company	Company should provide Pacific Telephone Company an accurate forecast of its ultimate telephone service requirements three years prior to actual need.

<sup>a</sup>These agencies or utilities are responsible for providing improvement. Funding may be derived from the responsible agency or, in turn, from other agencies or developers (see procedure remarks).



Table 6-4. Site 4—Off-Site Road and Utility Improvements

Road or utility	Improvement needed	Responsible agency or utility <sup>a</sup>	Procedure for providing improvement
Transportation	No improvements needed.		
Water	No improvements needed.		
Sanitary sewers	No improvements needed.		
Storm drainage	No improvements needed.		
Electricity	Extension of 10,000 kw line to site.	Sacramento Municipal Utility District (SMUD)	Company should contact SMUD as early as possible in the planning stage of facility to insure timely utility extension.
Natural gas	No improvements needed.	Pacific Telephone Company	Company should provide Pacific Telephone Company an accurate forecast of its ultimate telephone service requirements three years prior to actual need.
Telephone	Extension of telephone lines and provision of special circuits.		

<sup>a</sup>These agencies or utilities are responsible for providing improvement.

are preliminary planning level values which are useful for comparison of the sites but should not be used for budgeting purposes. The appropriate departments and divisions under the office of the City Engineer should be consulted as planning proceeds and refined cost estimates become necessary. Aside from the wastewater interceptor federal/state construction grant payback which is unique to Sites 1 and 2, no estimate has been made of the cost of sanitary sewer service improvements. Such improvements, as well as storm drainage improvements, are financed by the City through special assessment districts with no City capital outlay for construction. In the past, the City has provided capital for transportation and water service improvements, and this is why preliminary estimates of these costs are provided in the tables. It is noted that there is a growing trend and precedent for requiring developers to provide the capital for transportation and water service improvements. Therefore, it cannot be assumed that the cost of such improvements to serve any of the sites would be wholly or even partially financed by the City.

Transportation Improvements. As discussed in Chapter 4, transportation improvements at Sites 1 and 2 must take into consideration the fact that development of a 100-acre industrial park on these 1,300- to 1,400-acre sites would open the way to eventual development of the remaining acreage. Because piecemeal improvement of Del Paso Road to accommodate development would not be desirable or cost effective, it is assumed that a Del Paso Road improvement plan for a 100-acre development would take into account the probability that other development would follow shortly thereafter. Accordingly, the transportation improvements identified in Tables 6-1 and 6-2 for these two sites are of a scale which would improve the street capacity to serve a major portion of the Site 1 and Site 2 areas.

Water Service Improvements. The water service discussion in Chapter 4 addresses the need to take into consideration the fact that development of a 100-acre industrial park on Site 1 or 2 would open the way to eventual development of the entire area of these 1,300- to 1,400-acre sites. As with the transportation improvements, piecemeal development of City water service into these areas would not be desirable. Therefore, the costs in Tables 6-1 and 6-2 assume construction of a major (24-inch) water transmission main north to Del Paso Road to serve development on these sites.



## CHAPTER 7

### MAPS

This chapter contains all map figures referenced in the text of Chapters 1 through 6. These map figures are as follow:

Figure 1. Study Area

Figure 2. Existing and Potential Industrial Areas

Figure 3. Tracts of Vacant Land of 100 or  
More Acres Within Existing and  
Potential Industrial Areas

Figure 4. Potential Industrial Park Sites

Figure 4a. Potential Industrial Park Sites

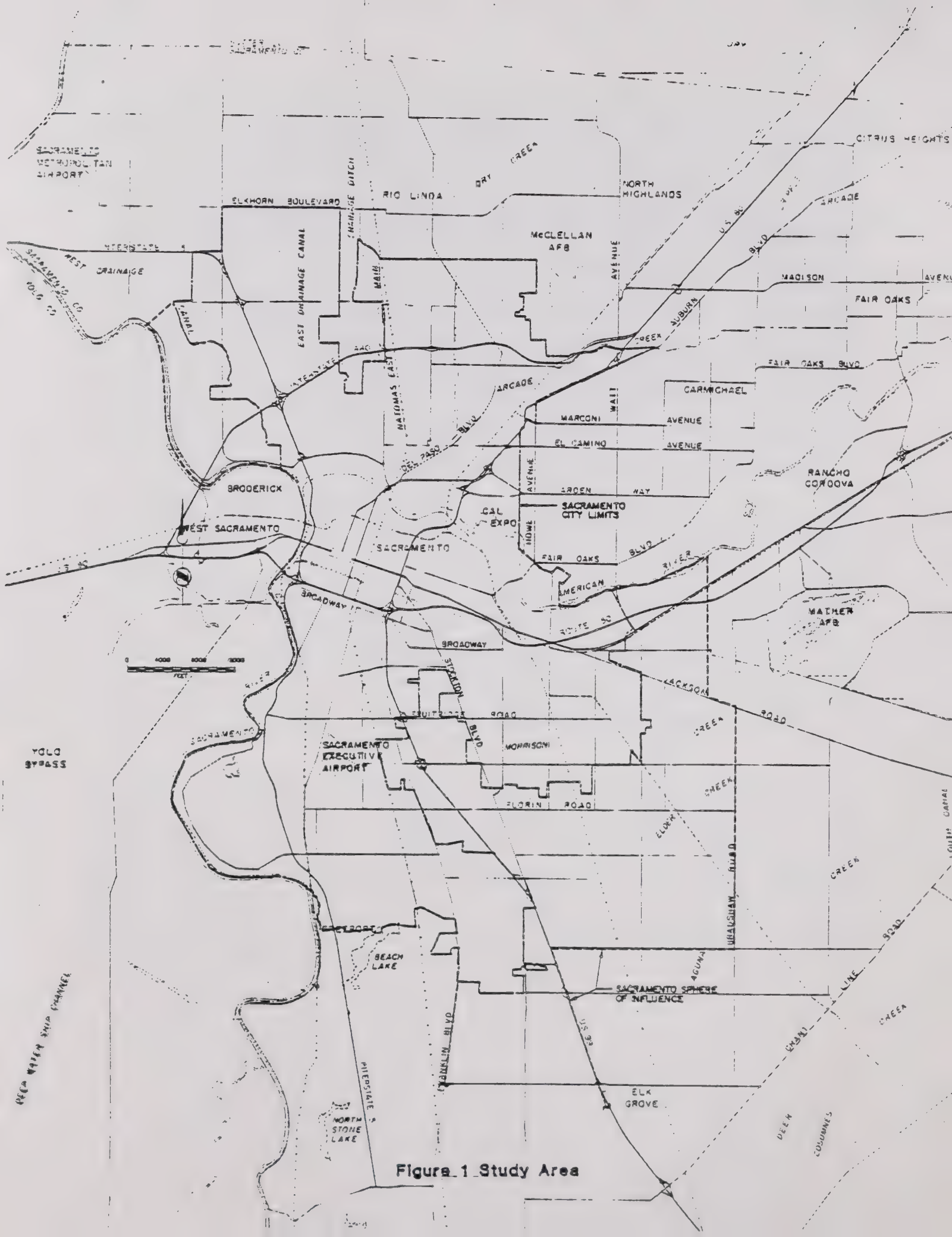
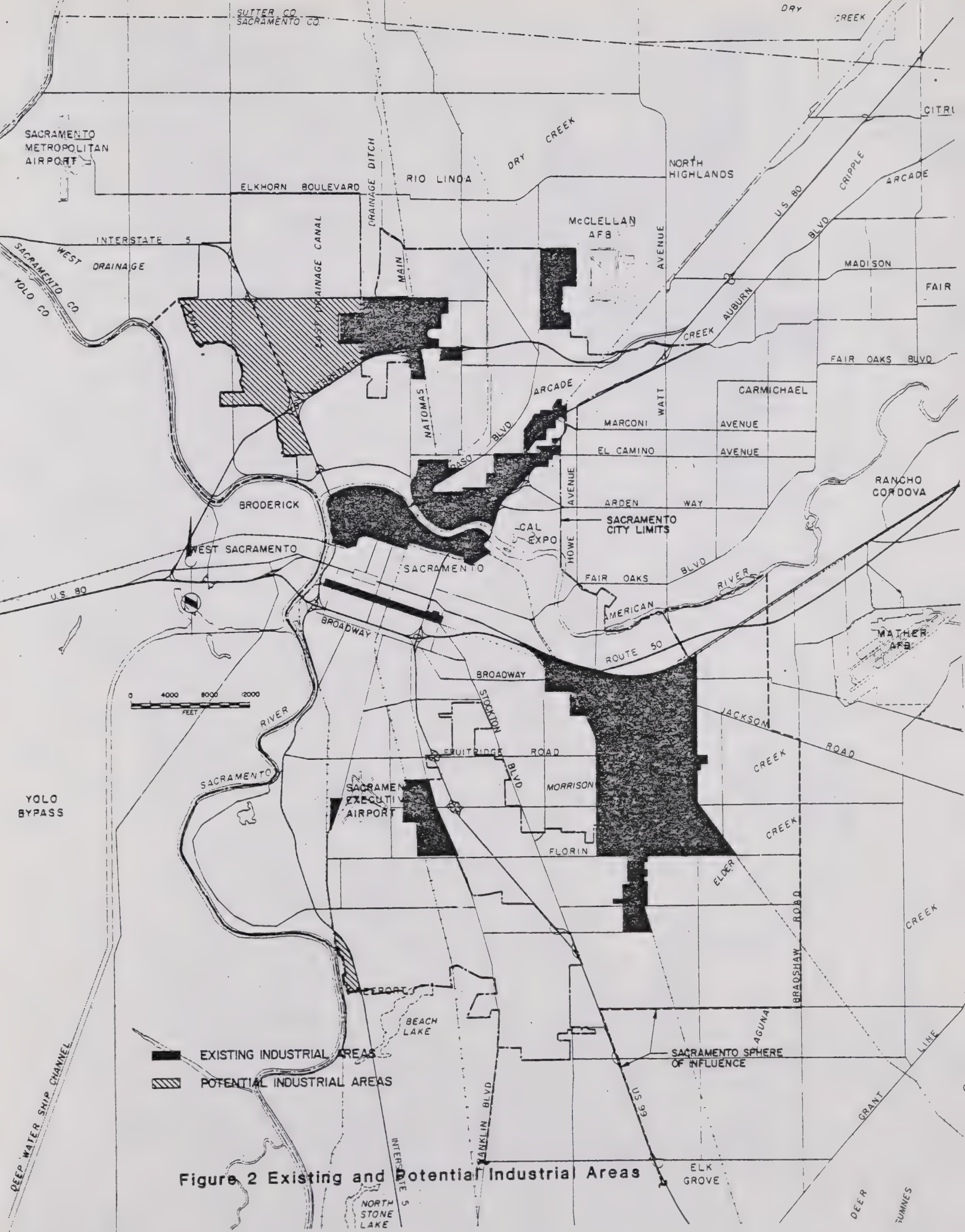


Figure 1 Study Area





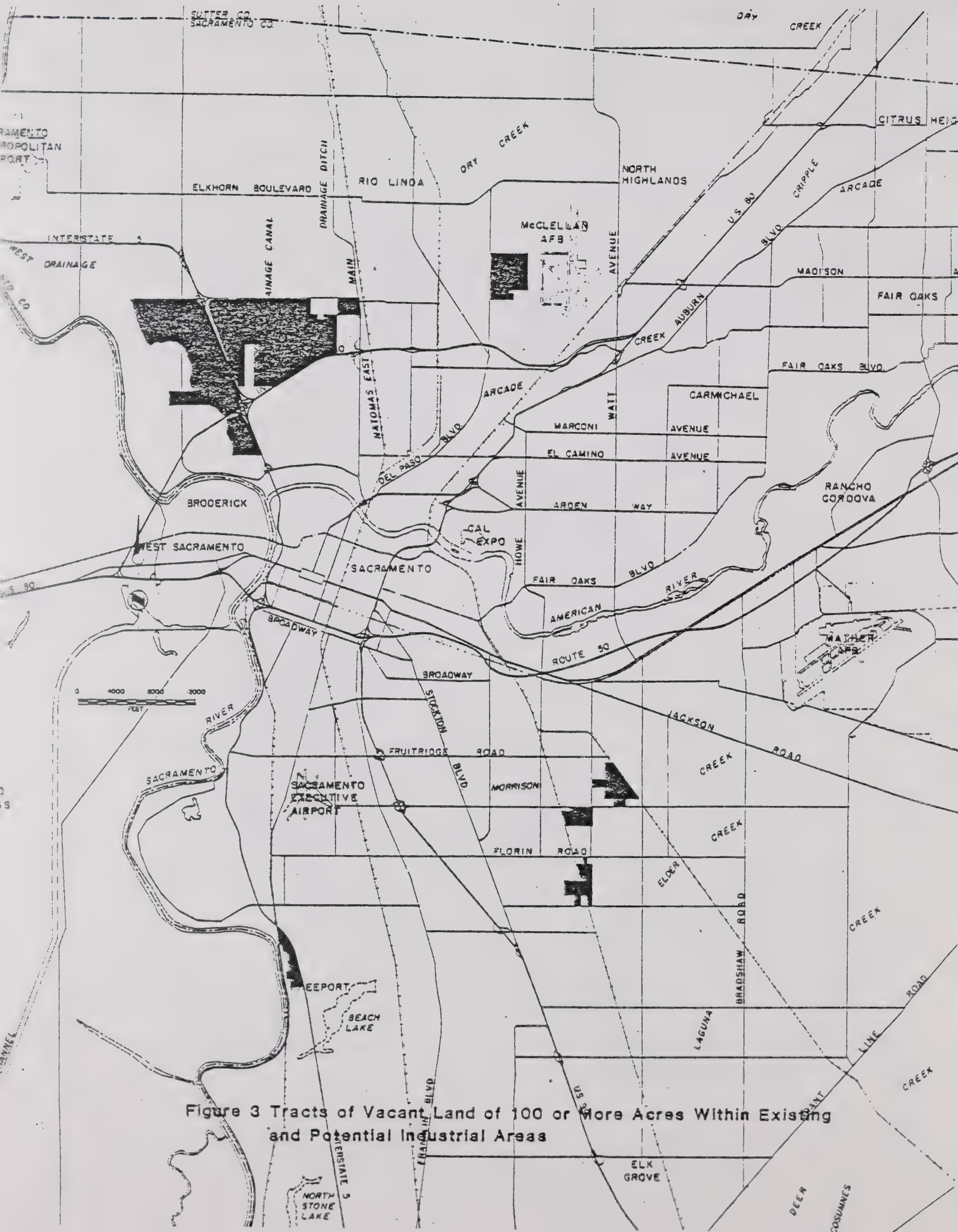


Figure 3 Tracts of Vacant Land of 100 or More Acres Within Existing and Potential Industrial Areas



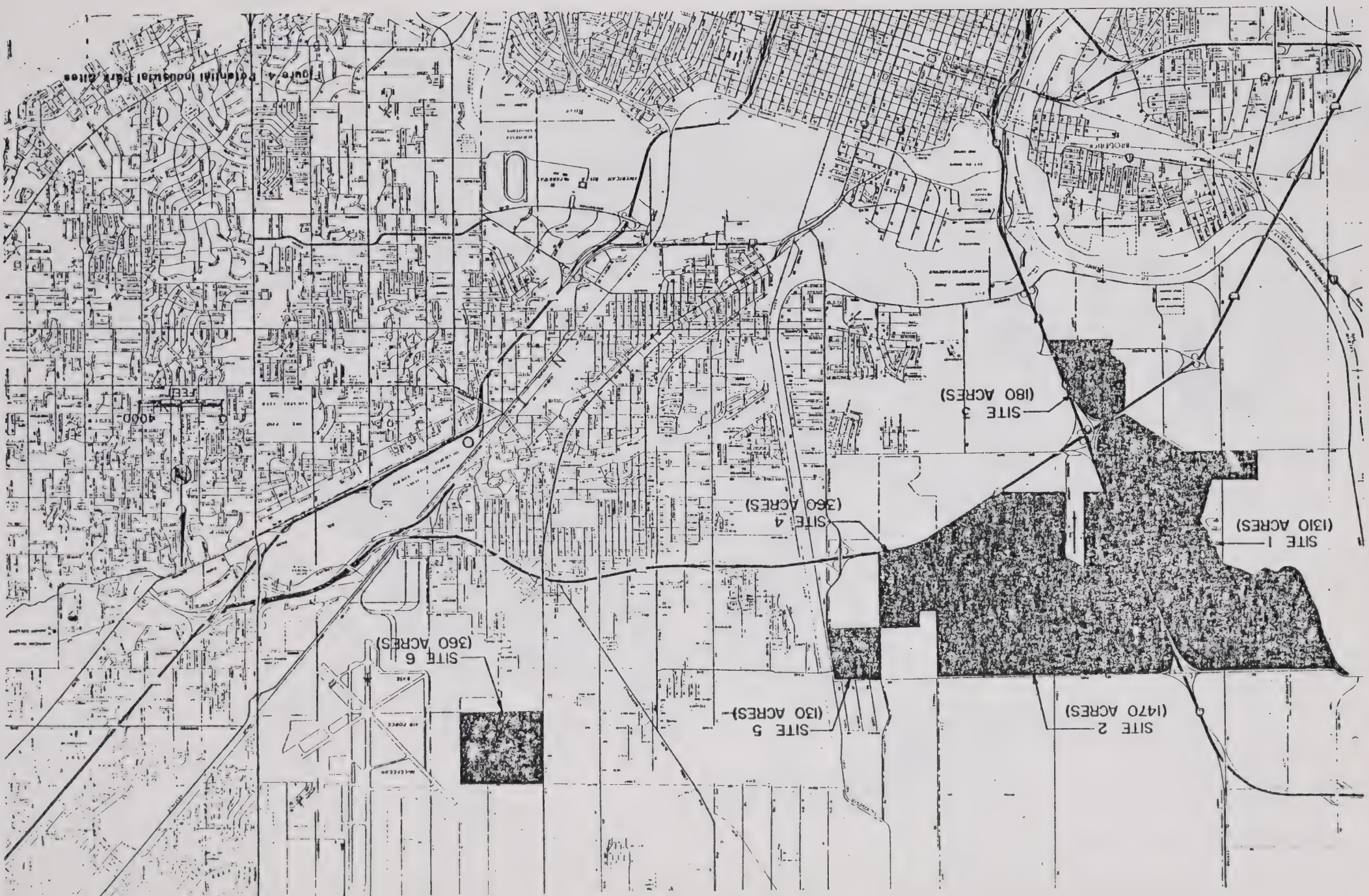








Figure 4a. Potential Industrial Park Sites





## REFERENCES

## REFERENCES

1. Santa Clara County Manufacturing Group. Jobs/Housing Task Force, Vacant Land in Santa Clara County Implications for Job Growth and Housing in the 1980's, 22 pp. + exhibits. February 1980.
2. Santa Clara County. 1980 Industrial Directory. Prepared by Business Information Systems, Inc. 1980.
3. City of Sacramento.
4. City of Morgan Hill and Wiltron Company. Morgan Hill Business Park Master Plan and Draft Environmental Impact Report. Master Plan prepared by George S. Nolte & Associates, Draft EIR prepared by Creegan & D'Angelo. February 1980.
5. Frank Tanno, Santa Clara City Electric Department, personal communication. February 10, 1981.
6. Mason M. Sperry and John P. O'Banion, Sacramento Municipal Utility District, personal communication. February 10, 1981.
7. Sacramento Area Consultants. Subsequent Environmental Impact Report on Natomas Interceptor System. Prepared for Sacramento Regional County Sanitation District. August 1979.
8. Doug Fredricks, County of Sacramento, Water Quality Division, personal communication. February 11, 1981.
9. Dick Hathorn, Santa Clara City Water and Sewer Agency, personal communication. January 12, 1981.
10. Bill Hetland, City of Sacramento, Water and Sewers Division, personal communication. February 11, 1981.
11. Rich Schmidt, City of Sacramento, Engineering Department, personal communication. February 13, 1981.
12. Rich Overton, Sacramento City Police Department, Office of Administrative Services/Community Resources Section, personal communication. February 17, 1981.
13. Harry Powell and Dennis Loheit, City of Sacramento, Fire Department, personal communication. February 13, 1981.
14. Jim McCormack, County of Sacramento, Water Resources Division, personal communication. February 18, 1981.



15. Roy E. Verley and Glenn Affleck, Hewlett-Packard, personal communication. December 16, 1980.
16. John Pitalo, Morton and Pitalo, personal communication.
17. Jim McCormack, County of Sacramento, Water Resources Division, personal communication. February 18, 1981.
18. William M. Sylvia, Pacific Gas and Electric Company, personal communication. February 13, 1981.
19. The Sacramento Union. "Natomas: Industry vs. Agriculture." March 1, 1981, p. B4.
20. Leo Tishbirek, County of Sacramento, Planning Department, personal communication. January 21, 1981.
21. Bill Aguirre, City of Sacramento, Housing and Redevelopment Agency, personal communication. January 12, 1981.
22. Paul Stewart, Building Industry Association, personal communication. March 5, 1981.
23. California Department of Transportation. Highway Capacity Manual, HRB Special Report 87, Table 10.13. Date unknown.

APPENDIX A

SURVEY OF HIGH TECHNOLOGY INDUSTRY  
LOCATION AND SITE REQUIREMENTS





## CITY OF SACRAMENTO

PHILLIP L. ISENBERG

Mayor

City Hall, Room 202

Sacramento, California 95814

(916) 449-5400

January 14, 1981

Subject: Survey of High Technology Industry  
Location and Site Requirements

The City of Sacramento is undertaking a study to determine the capability of locating high technology industries within or near the City of Sacramento. The J. B. Gilbert & Associates Division of Brown and Caldwell has been selected to develop this study.

To assess the resources of the Sacramento area, a selected number of companies are being contacted to obtain an understanding of the general location and plant site requirements of high technology industries. The enclosed questionnaire will help us identify how effectively Sacramento measures up to the expectations of industry. Responses will assist us in recommending a development program to accommodate current and future industrial growth.

Responses will be tabulated and published only in aggregate form. Individual answers and comments will be held in confidence. If you should have any questions about this study, please do not hesitate to call Gene Masuda, Sacramento City Planning Department, at (916) 449-5381, or Lynda Thompson, Brown and Caldwell, at (916) 444-0123.

Please complete the enclosed questionnaire and return it in the postage-paid envelope provided. If at all possible, the completed questionnaire should be returned by February 6, 1981. Thank you for your cooperation and assistance.

Sincerely,

Mayor Phil Isenberg

Enclosures

SURVEY OF HIGH TECHNOLOGY INDUSTRY  
LOCATION AND SITE REQUIREMENTS  
(CONFIDENTIAL)

This form is designed to obtain information on various locational requirements which your company would consider in arriving at any decision to construct new or expanded facilities. Since your company is a member of one of the selected high technology industries under study, we wish to obtain your expert input as to the locational requirements for the construction of a new plant, whether or not you plan to construct additional facilities in the foreseeable future.

Please note that no actual data totals are requested on this form. All that is necessary is to provide an estimate or rating that most appropriately describes the locational factor being studied.

NAME OF FIRM (optional) \_\_\_\_\_

CONTACT PERSON (optional) \_\_\_\_\_

PRINCIPAL PRODUCT/ACTIVITY \_\_\_\_\_

CURRENT NUMBER OF EMPLOYEES \_\_\_\_\_

1. New or Expanded Plant. Does your company have any tentative plans to establish a plant at a new location in the next five years?

\_\_\_\_ Yes. Please answer the following questions on the basis of locational requirements associated with these tentative plans for new or expanded facilities.

\_\_\_\_ No. Please answer the following questions as if you actually were planning new or expanded facilities on the basis of your general knowledge of current trends and developments influencing location requirements in the manufacture of your product.

2. Location Preference. Which of the following would you prefer to locate in?

a. A fully planned industrial park with restrictive covenants. \_\_\_\_\_

b. An area zoned for light industry with on-site utilities. \_\_\_\_\_



- c. An area zoned for heavy industry with on-site utilities. \_\_\_\_\_
- d. An undeveloped site zoned for light industry. \_\_\_\_\_
- e. An undeveloped site zoned for heavy industry. \_\_\_\_\_
- f. No preference. \_\_\_\_\_
3. Size of Plant Site. What size plant site (total land area, including physical features, parking, outside storage, future growth needs) would probably be most preferable?
- |                           |                                 |
|---------------------------|---------------------------------|
| a. Less than 1 acre _____ | e. 21 to 50 acres _____         |
| b. 1 to 4 acres _____     | f. 51 to 100 acres _____        |
| c. 5 to 10 acres _____    | g. 101 to 200 acres _____       |
| d. 10 to 20 acres _____   | h. Greater than 200 acres _____ |
4. Expected Site Acquisition Cost. What is the most you be prepared to pay in the preferred location and plant site size indicated in Items 2 and 3 above?
- |                                  |
|----------------------------------|
| a. Less than \$1.50/sq.ft. _____ |
| b. \$1.50 to \$2.50/sq.ft. _____ |
| c. \$2.50 to \$3.50/sq.ft. _____ |
| d. \$3.50 to \$5.00/sq.ft. _____ |
| e. Over \$5.00/sq.ft. _____      |
5. Employees. Estimate the approximate number of employees at a new plant when fully operational.
- |                              |                               |
|------------------------------|-------------------------------|
| a. Under 10 employees _____  | d. 100 to 250 employees _____ |
| b. 11 to 50 employees _____  | e. 251 to 500 employees _____ |
| c. 51 to 100 employees _____ | f. Over 500 employees _____   |
6. Freeway/Highway Access. What is the maximum distance from the nearest major freeway or highway access that would be acceptable for a plant site location?
- |                   |                      |
|-------------------|----------------------|
| a. Adjacent _____ | d. 1-1/2 miles _____ |
| b. 1/2-mile _____ | e. No maximum _____  |
| c. 1 mile _____   |                      |
7. Airport Access. If air transportation is an important consideration, what is the longest travel time allowance between the plant site and air terminal which would be considered acceptable?
- |                               |                               |
|-------------------------------|-------------------------------|
| a. Less than 15 minutes _____ | c. 30 minutes to 1 hour _____ |
| b. 15 to 30 minutes _____     | d. Not important _____        |

8. Proximity to Residential Areas. How close would you prefer to locate a new plant site from major residential growth areas?

- |                   |       |                   |       |
|-------------------|-------|-------------------|-------|
| a. Within 2 miles | _____ | d. 10 to 20 miles | _____ |
| b. 2 to 5 miles   | _____ | e. No preference  | _____ |
| c. 5 to 10 miles  | _____ |                   |       |

9. Adjacent Land Uses. Which of the following land uses would generally be considered incompatible with your operations if located adjacent to your plant site?

- |  |       |
|--|-------|
| a. Residential   | _____ |
| b. Industrial Non-Manufacturing (warehousing, storage, trucking service) | _____ |
| c. Light Manufacturing   | _____ |
| d. Transportation, Communications, Utilities                             | _____ |
| e. Retail Activities (shopping centers, hotels, motels)                  | _____ |
| f. Office Activities   | _____ |

10. Tolerance of Electrical Service Interruptions. If your operations are sensitive to electrical service interruptions, what is the maximum amount of interruptions per year you would consider tolerable?

- |  |       |
|--|-------|
| a. No interruptions  | _____ |
| b. Two or less interruptions per year of no more than 30 minutes | _____ |
| c. Two or less interruptions per year of no more than 1 hour     | _____ |
| d. Operations can tolerate more than two interruptions per year  | _____ |

11. Special Utility Requirements. Does your company have special utility requirements? If so, please check those which apply to your needs. If possible, also estimate annual requirements.

<u>Utility</u>	<u>Annual Requirements</u>
a. Water	_____
b. Wastewater Disposal	_____
c. Electricity	_____
d. Solid Waste Disposal	_____
e. Hazardous Waste Disposal	_____
f. Natural Gas	_____



12. Consideration of Sacramento Area. Please indicate if you have ever considered any of the following areas as a potential location for a new plant site.

a. City of Sacramento \_\_\_\_\_

b. Unincorporated area of Sacramento County \_\_\_\_\_

c. Sacramento Metropolitan Area (Yolo, Placer, and Sacramento Counties) \_\_\_\_\_

13. Plant Type. Which type of plant would you most likely construct if you were to locate new facilities in the Sacramento area?

a. Research and Development \_\_\_\_\_

b. Production and/or Assembly \_\_\_\_\_

c. Regional Headquarters \_\_\_\_\_

d. Corporate Headquarters \_\_\_\_\_

e. Other (specify) \_\_\_\_\_

14. The following space is provided for any general comments you may wish to make.

---

---

---

---

---

---

---

---

---

---

Adopted from U.S. Department of Commerce, Bureau of the Census, Survey of Industrial Location Determinants, Form ED-707B, 4-26-71.

15. Rating of Location and Site Requirements.  
important are the following factors?

In selecting a location, how

<u>Rating Factors</u>	<u>Very Important</u>	<u>Somewhat Important</u>	<u>Not Important</u>
Site acquisition costs	_____	_____	_____
Contiguous land uses	_____	_____	_____
Quality of nearby land development	_____	_____	_____
Electrical energy costs	_____	_____	_____
Reliable energy source	_____	_____	_____
Natural gas service	_____	_____	_____
Wastewater disposal service	_____	_____	_____
Water service (volume)	_____	_____	_____
Water quality	_____	_____	_____
Proximity to hazardous waste disposal site	_____	_____	_____
Solid waste disposal service	_____	_____	_____
Availability of rail service	_____	_____	_____
Freeway visibility	_____	_____	_____
Freeway access	_____	_____	_____
Availability of truck transportation	_____	_____	_____
Proximity to airport with convenient flight schedules	_____	_____	_____
Availability of public transportation	_____	_____	_____
Air quality regulations	_____	_____	_____
Availability of unskilled or semiskilled labor	_____	_____	_____
Availability of skilled labor	_____	_____	_____
Labor force costs	_____	_____	_____
Unemployment rate trend	_____	_____	_____
Community assistance in employee training	_____	_____	_____
College and university research and training capabilities	_____	_____	_____
Public safety (police and fire) services	_____	_____	_____
Existing industrial zone district	_____	_____	_____
Housing availability and costs	_____	_____	_____
Cultural/recreation activities	_____	_____	_____
Government and public attitudes toward industrial growth	_____	_____	_____
Quality of primary and secondary schools	_____	_____	_____
Distance to other company divisions or main office	_____	_____	_____



16. Market Potential for the City of Sacramento. Based on knowledge you may have of the Sacramento area, how would you rate the City of Sacramento as a potential location for new or expanded facilities compared to other potential locations in the United States?

<u>Rating Factors</u>	<u>Good</u>	<u>Fair</u>	<u>Poor</u>	<u>Not Sure</u>
Availability and quality of industrial sites	_____	_____	_____	_____
Reasonable site acquisition costs	_____	_____	_____	_____
Availability and quality of labor force	_____	_____	_____	_____
Wage rates	_____	_____	_____	_____
Employee training capabilities	_____	_____	_____	_____
Energy reliability	_____	_____	_____	_____
Energy costs	_____	_____	_____	_____
Water quality, supply, and cost	_____	_____	_____	_____
Hazardous waste disposal	_____	_____	_____	_____
Wastewater disposal	_____	_____	_____	_____
Air carrier service	_____	_____	_____	_____
Regional transit system	_____	_____	_____	_____
Major highways and freeways	_____	_____	_____	_____
Employee commuting	_____	_____	_____	_____
Housing availability and costs	_____	_____	_____	_____
Quality of primary and secondary schools	_____	_____	_____	_____
College and university curriculum and resources	_____	_____	_____	_____
Government/business relationships	_____	_____	_____	_____
Public attitudes towards business growth	_____	_____	_____	_____
Economic/social stability	_____	_____	_____	_____
Recreational opportunities	_____	_____	_____	_____
Geographic location	_____	_____	_____	_____
Overall quality of life	_____	_____	_____	_____

APPENDIX B

INTERVIEW QUESTIONS OF HIGH TECHNOLOGY FIRMS WHO  
HAVE LOCATED OR CONSIDERED LOCATING IN THE SACRAMENTO AREA



## INTERVIEW QUESTIONS

1. At the time you were considering the Sacramento area for a plant site, was your firm also evaluating other communities?
2. What were the three most important factors, by order of importance, which influenced the decision to locate in Metropolitan Sacramento?
3. What was the perception of the availability and quality of industrial sites?
4. Were the site acquisition costs reasonable?
5. Is "restrictive covenants" relating to industrial site a term that is common knowledge to site-seeking companies?
6. How important was the relation of the sites to freeways/highways?
7. If distance from freeways/highways is not an important location factor, then is travel time or traffic congestion more of a factor than distance?
8. Land-use characteristics that would be a deterrent to locating at a site, assuming most regional requirements can be met
  - a. Airport noise
  - b. Railroad noise
  - c. Industrial manufacturing noise
  - d. Proximity to heavy industrial uses and why
    1. Warehousing
    2. Auto wrecking
    3. Heavy manufacturing
    4. Railroad right of way
    5. Outdoor equipment storage
  - e. Any residential land use or only some types of residential; i.e.
    1. Substandard or low income
    2. High density
    3. Mobile home parks
    4. Other
  - f. Characteristics of heavy industrial use most objectionable with regard to your industry
    1. Appearance
    2. Noise
    3. Vibration
    4. Dust, smoke, fumes
    5. Heavy truck traffic

9. With regard to commercial uses, would motels and eating establishments be considered compatible if properly located contiguous to your company?
10. Was proximity of potential plant sites to residential growth areas important?
11. How would you rate the availability and quality of the labor force?
12. What was the assessment of energy reliability and costs?
13. How did your company perceive the government and public attitudes in Metropolitan Sacramento toward industrial growth?
14. What was your company's evaluation of the educational system?
15. What was your company's view of the housing availability and costs in Metropolitan Sacramento?
16. What were the three most negative factors that your firm encountered that may have affected the decision to locate here?



APPENDIX C

SURVEY RESULTS OF ALL RESPONDING FIRMS  
(134 RESPONSES)

SURVEY OF HIGH TECHNOLOGY INDUSTRY  
LOCATION AND SITE REQUIREMENTS  
(CONFIDENTIAL)

This form is designed to obtain information on various locational requirements which your company would consider in arriving at any decision to construct new or expanded facilities. Since your company is a member of one of the selected high technology industries under study, we wish to obtain your expert input as to the locational requirements for the construction of a new plant, whether or not you plan to construct additional facilities in the foreseeable future.

Please note that no actual data totals are requested on this form. All that is necessary is to provide an estimate or rating that most appropriately describes the locational factor being studied.

NAME OF FIRM (optional) CONFIDENTIAL

CONTACT PERSON (optional) CONFIDENTIAL

PRINCIPAL PRODUCT/ACTIVITY

CURRENT NUMBER OF EMPLOYEES Average (mean): 1,307 (median): 75

1. New or Expanded Plant. Does your company have any tentative plans to establish a plant at a new location in the next five years?

66% Yes. Please answer the following questions on the basis of locational requirements associated with these tentative plans for new or expanded facilities.

32% No. Please answer the following questions as if you actually were planning new or expanded facilities on the basis of your general knowledge of current trends and developments influencing location requirements in the manufacture of your product.

- 1% No response.  
2. Location Preference. Which of the following would you prefer to locate in?

- a. A fully planned industrial park with restrictive covenants. 35%
- b. An area zoned for light industry with on-site utilities. 55%



- c. An area zoned for heavy industry with on-site utilities. 6%
- d. An undeveloped site zoned for light industry. 9%
- e. An undeveloped site zoned for heavy industry. 2%
- f. No preference. 4%
3. Size of Plant Site. What size plant site (total land area, including physical features, parking, outside storage, future growth needs) would probably be most preferable?
- |                     |            |                           |           |
|---------------------|------------|---------------------------|-----------|
| a. Less than 1 acre | <u>16%</u> | e. 21 to 50 acres         | <u>7%</u> |
| b. 1 to 4 acres     | <u>43%</u> | f. 51 to 100 acres        | <u>4%</u> |
| c. 5 to 10 acres    | <u>15%</u> | g. 101 to 200 acres       | <u>1%</u> |
| d. 10 to 20 acres   | <u>13%</u> | h. Greater than 200 acres | <u>1%</u> |
| No Response         | <u>1%</u>  |                           |           |
4. Expected Site Acquisition Cost. What is the most you be prepared to pay in the preferred location and plant site size indicated in Items 2 and 3 above?
- |                            |            |             |            |
|----------------------------|------------|-------------|------------|
| a. Less than \$1.50/sq.ft. | <u>22%</u> | No Response | <u>18%</u> |
| b. \$1.50 to \$2.50/sq.ft. | <u>36%</u> |             |            |
| c. \$2.50 to \$3.50/sq.ft. | <u>13%</u> |             |            |
| d. \$3.50 to \$5.00/sq.ft. | <u>8%</u>  |             |            |
| e. Over \$5.00/sq.ft.      | <u>2%</u>  |             |            |
5. Employees. Estimate the approximate number of employees at a new plant when fully operational.
- |                        |            |                         |            |
|------------------------|------------|-------------------------|------------|
| a. Under 10 employees  | <u>6%</u>  | d. 100 to 250 employees | <u>23%</u> |
| b. 11 to 50 employees  | <u>24%</u> | e. 251 to 500 employees | <u>9%</u>  |
| c. 51 to 100 employees | <u>21%</u> | f. Over 500 employees   | <u>16%</u> |
| No Response            | <u>1%</u>  |                         |            |
6. Freeway/Highway Access. What is the maximum distance from the nearest major freeway or highway access that would be acceptable for a plant site location?
- |             |            |                |            |
|-------------|------------|----------------|------------|
| a. Adjacent | <u>3%</u>  | d. 1-1/2 miles | <u>17%</u> |
| b. 1/2-mile | <u>26%</u> | e. No maximum  | <u>30%</u> |
| c. 1 mile   | <u>22%</u> | No Response    | <u>1%</u>  |
7. Airport Access. If air transportation is an important consideration, what is the longest travel time allowance between the plant site and air terminal which would be considered acceptable?
- |                         |            |                         |            |
|-------------------------|------------|-------------------------|------------|
| a. Less than 15 minutes | <u>10%</u> | c. 30 minutes to 1 hour | <u>24%</u> |
| b. 15 to 30 minutes     | <u>44%</u> | d. Not important        | <u>21%</u> |
| No Response             | <u>1%</u>  |                         |            |

8. Proximity to Residential Areas. How close would you prefer to locate a new plant site from major residential growth areas?

a. Within 2 miles	<u>14%</u>	d. 10 to 20 miles	<u>7%</u>
b. 2 to 5 miles	<u>36%</u>	e. No preference	<u>10%</u>
c. 5 to 10 miles	<u>34%</u>	No Response	<u>-0-</u>

9. Adjacent Land Uses. Which of the following land uses would generally be considered incompatible with your operations if located adjacent to your plant site?

a. Residential	<u>31%</u>
b. Industrial Non-Manufacturing (warehousing, storage, trucking service)	<u>30%</u>
c. Light Manufacturing	<u>7%</u>
d. Transportation, Communications, Utilities	<u>21%</u>
e. Retail Activities (shopping centers, hotels, motels)	<u>38%</u>
f. Office Activities	<u>7%</u>
No Response	<u>23%</u>

10. Tolerance of Electrical Service Interruptions. If your operations are sensitive to electrical service interruptions, what is the maximum amount of interruptions per year you would consider tolerable?

a. No interruptions	<u>34%</u>
b. Two or less interruptions per year of no more than 30 minutes	<u>36%</u>
c. Two or less interruptions per year of no more than 1 hour	<u>13%</u>
d. Operations can tolerate more than two interruptions per year	<u>18%</u>

11. Special Utility Requirements. Does your company have special utility requirements? If so, please check those which apply to your needs. If possible, also estimate annual requirements.

<u>Utility</u>	<u>Annual Requirements</u>
a. Water	<u>37%</u>
b. Wastewater Disposal	<u>22%</u>
c. Electricity	<u>50%</u>
d. Solid Waste Disposal	<u>14%</u>
e. Hazardous Waste Disposal	<u>19%</u>
f. Natural Gas	<u>22%</u>
No Response	<u>45%</u>



12. Consideration of Sacramento Area. Please indicate if you have ever considered any of the following areas as a potential location for a new plant site.

a. City of Sacramento	9%
b. Unincorporated area of Sacramento County	16%
c. Sacramento Metropolitan Area (Yolo, Placer, and Sacramento Counties)	23%
No Response	58%

13. Plant Type. Which type of plant would you most likely construct if you were to locate new facilities in the Sacramento area?

a. Research and Development	29%
b. Production and/or Assembly	86%
c. Regional Headquarters	3%
d. Corporate Headquarters	7%
e. Other (specify) _____	3%
No Response	6%

14. The following space is provided for any general comments you may wish to make.

SEE ATTACHED SUMMARY

Adopted from U.S. Department of Commerce, Bureau of the Census, Survey of Industrial Location Determinants, Form ED-707B, 4-26-71.

#### 14. Summary of General Comments

1. One firm stated a preference for a rural almost primitive area that reasonably met transportation access requirements for customer training.
2. Electronic manufacturer desires to be located within 10 to 20 miles of like companies and suppliers to provide fast delivery of products and parts. Good airline service is also important.
3. The customer base in the Bay Area dictates one firm's present location.
4. A low cost, dependable electrical power supply is vital. Proximity to industrial markets is important. Attitude of local and state government toward business is vital.
5. Electronic equipment manufacturer wants a location out of the Bay Area, but is concerned about being located a great distance from specialized vendors.
6. One firm would like more information on availability of skilled employees as well as possible site availability in the area south of Highway 50.
7. One firm moved to Newcastle in February of 1981. This firm will be starting a new business and will be looking for a small manufacturing site/building.
8. One firm considered Sacramento and Roseville as two likely candidates for expansion. This firm considers the best potential location to be out of the state for reasons of excessive taxes and lack of available work force. In looking for a new plant site location, the cost of plant sites and construction, availability of stable skilled work force, and inexpensive utilities are important. Local cost of living is also an important consideration.
9. One firm located a facility in Fairfield and expects eventually to have 250,000 square feet of research and development, and electronic manufacturing. Clean industry should be intermixed with commercial and residential uses so that housing and eating and shopping facilities are nearby for employees. This firm opposes location in industrial parks because they tend to lack services for employees and have excessive traffic congestion.
10. One firm is interested in the survey answers relating to Sacramento for comparison with a present (unnamed) highly desirable location.



11. One firm would consider a leased building for light manufacturing assembly. Sacramento had not been considered due to its remoteness from Santa Clara.
12. One firm generally prefers a location near government/military installations.
13. One firm is presently looking for a site to build a 150,000 square-foot, campus-style manufacturing facility. Sacramento is a strong contender, but costs and taxes (state taxes on capital equipment) are high and a very important factor. Proximity to Bay Area and quality of life are plus factors for Sacramento.
14. One firm is interested in Roseville and desires master planning on an integrated technology park in Roseville with a surrounding mixed-use residential zone to assure adequate housing.

TOTAL SURVEYS = 134

TOTAL RESPONSES TO NUMBER 15 = 128  
TOTAL NO RESPONSES TO NUMBER 15 = 6

15. Rating of Location and Site Requirements. In selecting a location, how important are the following factors?

<u>Rating Factors</u>	(Percent of 128)			
	<u>Very Important</u>	<u>Somewhat Important</u>	<u>Not Important</u>	<u>No Response</u>
Site acquisition costs	59%	37%	2%	2%
Contiguous land uses	25%	52%	19%	4%
Quality of nearby land development	31%	40%	19%	2%
Electrical energy costs	45%	44%	11%	1%
Reliable energy source	66%	27%	8%	-0-
Natural gas service	27%	39%	30%	4%
Wastewater disposal service	27%	27%	46%	1%
Water service (volume)	18%	30%	48%	3%
Water quality	16%	47%	34%	3%
Proximity to hazardous waste disposal site	15%	27%	54%	3%
Solid waste disposal service	7%	35%	55%	2%
Availability of rail service	-0-	10%	87%	3%
Freeway visibility	6%	26%	66%	2%
Freeway access	22%	62%	16%	1%
Availability of truck transportation	43%	34%	22%	2%
Proximity to airport with convenient flight schedules	41%	38%	20%	1%
Availability of public transportation	14%	54%	30%	2%
Air quality regulations	16%	35%	46%	3%
Availability of unskilled or semiskilled labor	55%	30%	15%	-0-
Availability of skilled labor	64%	25%	10%	1%
Labor force costs	56%	37%	5%	2%
Unemployment rate trend	23%	46%	27%	5%
Community assistance in employee training	13%	45%	41%	2%
College and university research and training capabilities	30%	38%	30%	2%
Public safety (police and fire) services	49%	41%	9%	2%
Existing industrial zone district	22%	56%	19%	3%
Housing availability and costs	59%	35%	5%	-0-
Cultural/recreation activities	36%	52%	13%	-0-
Government and public attitudes toward industrial growth	67%	27%	5%	1%
Quality of primary and secondary schools	48%	44%	9%	-0-
Distance to other company divisions or main office	20%	34%	44%	2%



16. Market Potential for the City of Sacramento. Based on knowledge you may have of the Sacramento area, how would you rate the City of Sacramento as a potential location for new or expanded facilities compared to other potential locations in the United States?

<u>Rating Factors</u>	(Percent of 96)				
	<u>Good</u>	<u>Fair</u>	<u>Poor</u>	<u>Not Sure</u>	<u>No Response</u>
Availability and quality of industrial sites	42%	27%	5%	26%	-0-
Reasonable site acquisition costs	29%	36%	5%	28%	1%
Availability and quality of labor force	29%	35%	9%	26%	-0-
Wage rates	24%	45%	4%	27%	-0-
Employee training capabilities	11%	32%	8%	46%	2%
Energy reliability	22%	26%	8%	43%	1%
Energy costs	10%	36%	6%	45%	2%
Water quality, supply, and cost	21%	24%	2%	50%	3%
Hazardous waste disposal	4%	7%	7%	75%	6%
Wastewater disposal	5%	15%	3%	71%	6%
Air carrier service	21%	40%	5%	30%	4%
Regional transit system	5%	18%	8%	65%	4%
Major highways and freeways	70%	24%	-0-	5%	1%
Employee commuting	28%	31%	6%	31%	3%
Housing availability and costs	40%	32%	2%	25%	1%
Quality of primary and secondary schools	11%	24%	5%	58%	1%
College and university curriculum and resources	24%	29%	5%	40%	2%
Government/business relationships	10%	22%	7%	58%	2%
Public attitudes towards business growth	15%	14%	4%	65%	3%
Economic/social stability	29%	30%	1%	35%	4%
Recreational opportunities	64%	19%	3%	13%	2%
Geographic location	47%	35%	10%	7%	-0-
Overall quality of life	41%	34%	4%	21%	-0-

APPENDIX D

SURVEY RESULTS OF FIRMS WHO HAVE TENTATIVE PLANS TO  
ESTABLISH A PLANT AT A NEW LOCATION IN THE NEXT FIVE YEARS  
(89 RESPONSES)



SURVEY OF HIGH TECHNOLOGY INDUSTRY  
LOCATION AND SITE REQUIREMENTS  
(CONFIDENTIAL)

This form is designed to obtain information on various locational requirements which your company would consider in arriving at any decision to construct new or expanded facilities. Since your company is a member of one of the selected high technology industries under study, we wish to obtain your expert input as to the locational requirements for the construction of a new plant, whether or not you plan to construct additional facilities in the foreseeable future.

Please note that no actual data totals are requested on this form. All that is necessary is to provide an estimate or rating that most appropriately describes the locational factor being studied.

NAME OF FIRM (optional) CONFIDENTIAL

CONTACT PERSON (optional) CONFIDENTIAL

PRINCIPAL PRODUCT/ACTIVITY \_\_\_\_\_

CURRENT NUMBER OF EMPLOYEES Average (mean): 1,654 (median): 75

1. New or Expanded Plant. Does your company have any tentative plans to establish a plant at a new location in the next five years?

100% Yes. Please answer the following questions on the basis of locational requirements associated with these tentative plans for new or expanded facilities.

(Not Included) No. Please answer the following questions as if you actually were planning new or expanded facilities on the basis of your general knowledge of current trends and developments influencing location requirements in the manufacture of your product.

2. Location Preference. Which of the following would you prefer to locate in?

a. A fully planned industrial park with restrictive covenants. 36%

b. An area zoned for light industry with on-site utilities. 56%

- c. An area zoned for heavy industry with on-site utilities. 6%
- d. An undeveloped site zoned for light industry. 15%
- e. An undeveloped site zoned for heavy industry. 2%
- f. No preference. 2%  
No response 1%
3. Size of Plant Site. What size plant site (total land area, including physical features, parking, outside storage, future growth needs) would probably be most preferable?
- |                     |            |                     |            |
|---------------------|------------|---------------------|------------|
| a. Less than 1 acre | <u>13%</u> | e. 21 to 50 acres   | <u>10%</u> |
| b. 1 to 4 acres     | <u>45%</u> | f. 51 to 100 acres  | <u>6%</u>  |
| c. 5 to 10 acres    | <u>11%</u> | g. 101 to 200 acres | <u>2%</u>  |
| d. 10 to 20 acres   | <u>13%</u> | h. Greater than     |            |
| No response         | <u>1%</u>  | 200 acres           | <u>-0-</u> |
4. Expected Site Acquisition Cost. What is the most you be prepared to pay in the preferred location and plant site size indicated in Items 2 and 3 above?
- |                            |            |             |            |
|----------------------------|------------|-------------|------------|
| a. Less than \$1.50/sq.ft. | <u>19%</u> | No response | <u>18%</u> |
| b. \$1.50 to \$2.50/sq.ft. | <u>37%</u> |             |            |
| c. \$2.50 to \$3.50/sq.ft. | <u>15%</u> |             |            |
| d. \$3.50 to \$5.00/sq.ft. | <u>8%</u>  |             |            |
| e. Over \$5.00/sq.ft.      | <u>3%</u>  |             |            |
5. Employees. Estimate the approximate number of employees at-a new plant when fully operational.
- |                        |            |                         |            |
|------------------------|------------|-------------------------|------------|
| a. Under 10 employees  | <u>1%</u>  | d. 100 to 250 employees | <u>26%</u> |
| b. 11 to 50 employees  | <u>26%</u> | e. 251 to 500 employees | <u>10%</u> |
| c. 51 to 100 employees | <u>19%</u> | f. Over 500 employees   | <u>17%</u> |
| No response            | <u>1%</u>  |                         |            |
6. Freeway/Highway Access. What is the maximum distance from the nearest major freeway or highway access that would be acceptable for a plant site location?
- |             |            |                |            |
|-------------|------------|----------------|------------|
| a. Adjacent | <u>1%</u>  | d. 1-1/2 miles | <u>20%</u> |
| b. 1/2-mile | <u>24%</u> | e. No maximum  | <u>33%</u> |
| c. 1 mile   | <u>21%</u> | No response    | <u>1%</u>  |
7. Airport Access. If air transportation is an important consideration, what is the longest travel time allowance between the plant site and air terminal which would be considered acceptable?
- |                         |            |                         |            |
|-------------------------|------------|-------------------------|------------|
| a. Less than 15 minutes | <u>10%</u> | c. 30 minutes to 1 hour | <u>26%</u> |
| b. 15 to 30 minutes     | <u>40%</u> | d. Not important        | <u>24%</u> |

8. Proximity to Residential Areas. How close would you prefer to locate a new plant site from major residential growth areas?

a. Within 2 miles	<u>12%</u>	d. 10 to 20 miles	<u>8%</u>
b. 2 to 5 miles	<u>36%</u>	e. No preference	<u>9%</u>
c. 5 to 10 miles	<u>35%</u>	No response	<u>0</u>

9. Adjacent Land Uses. Which of the following land uses would generally be considered incompatible with your operations if located adjacent to your plant site?

a. Residential	<u>28%</u>
b. Industrial Non-Manufacturing (warehousing, storage, trucking service)	<u>37%</u>
c. Light Manufacturing	<u>8%</u>
d. Transportation, Communications, Utilities	<u>21%</u>
e. Retail Activities (shopping centers, hotels, motels)	<u>40%</u>
f. Office Activities	<u>3%</u>
No response	<u>22%</u>

10. Tolerance of Electrical Service Interruptions. If your operations are sensitive to electrical service interruptions, what is the maximum amount of interruptions per year you would consider tolerable?

a. No interruptions	<u>34%</u>
b. Two or less interruptions per year of no more than 30 minutes	<u>37%</u>
c. Two or less interruptions per year of no more than 1 hour	<u>13%</u>
d. Operations can tolerate more than two interruptions per year	<u>16%</u>

11. Special Utility Requirements. Does your company have special utility requirements? If so, please check those which apply to your needs. If possible, also estimate annual requirements.

<u>Utility</u>		<u>Annual Requirements</u>
a. Water	<u>37%</u>	_____
b. Wastewater Disposal	<u>25%</u>	_____
c. Electricity	<u>53%</u>	_____
d. Solid Waste Disposal	<u>17%</u>	_____
e. Hazardous Waste Disposal	<u>21%</u>	_____
f. Natural Gas	<u>21%</u>	_____
No response	<u>45%</u>	_____



- |  |            |
|--|------------|
| a. City of Sacramento  | <u>11%</u> |
| b. Unincorporated area of Sacramento County                                | <u>19%</u> |
| c. Sacramento Metropolitan Area (Yolo,<br>Placer, and Sacramento Counties) | <u>29%</u> |
| No response  | 62%        |

- |  |     |
|--|-----|
| a. Research and Development                    | 30% |
| b. Production and/or Assembly                  | 89% |
| c. Regional Headquarters                       | 3%  |
| d. Corporate Headquarters                      | 7%  |
| e. Other (specify) <u>See written comments</u> | 4%  |
| No response                                    | 4%  |

- [illegible]

Sheet 4 of 6

15. Rating of Location and Site Requirements. In selecting a location, how important are the following factors?

(Percent of 85)

<u>Rating Factors</u>	<u>Very Important</u>	<u>Somewhat Important</u>	<u>Not Important</u>	<u>No Response</u>
Site acquisition costs	58%	39%	1%	2%
Contiguous land uses	31%	48%	18%	4%
Quality of nearby land development	34%	52%	12%	2%
Electrical energy costs	46%	42%	11%	1%
Reliable energy source	68%	26%	6%	-0-
Natural gas service	22%	41%	32%	5%
Wastewater disposal service	28%	22%	47%	2%
Water service (volume)	19%	32%	46%	4%
Water quality	18%	51%	29%	2%
Proximity to hazardous waste disposal site	19%	25%	51%	6%
Solid waste disposal service	6%	40%	52%	2%
Availability of rail service	-0-	8%	87%	5%
Freeway visibility	9%	24%	65%	2%
Freeway access	20%	65%	14%	1%
Availability of truck transportation	44%	36%	16%	4%
Proximity to airport with convenient flight schedules	40%	40%	19%	1%
Availability of public transportation	16%	52%	29%	2%
Air quality regulations	13%	36%	45%	6%
Availability of unskilled or semiskilled labor	56%	33%	11%	-0-
Availability of skilled labor	69%	20%	9%	1%
Labor force costs	60%	35%	4%	1%
Unemployment rate trend	22%	46%	24%	8%
Community assistance in employee training	12%	48%	38%	2%
College and university research and training capabilities	34%	39%	24%	4%
Public safety (police and fire) services	42%	48%	7%	2%
Existing industrial zone district	19%	58%	19%	5%
Housing availability and costs	60%	33%	7%	-0-
Cultural/recreation activities	42%	46%	12%	-0-
Government and public attitudes toward industrial growth	73%	21%	5%	1%
Quality of primary and secondary schools	51%	44%	6%	-0-
Distance to other company divisions or main office	25%	33%	39%	4%

TOTAL SURVEYS = 89

TOTAL RESPONSES TO NUMBER 16 = 64  
TOTAL NO RESPONSES TO NUMBER 16 = 25

16. Market Potential for the City of Sacramento. Based on knowledge you may have of the Sacramento area, how would you rate the City of Sacramento as a potential location for new or expanded facilities compared to other potential locations in the United States?

<u>Rating Factors</u>	(Percent of 64)				
	<u>Good</u>	<u>Fair</u>	<u>Poor</u>	<u>Not Sure</u>	<u>No Respons.</u>
Availability and quality of industrial sites	<u>39%</u>	<u>25%</u>	<u>9%</u>	<u>27%</u>	<u>-0-</u>
Reasonable site acquisition costs	<u>30%</u>	<u>34%</u>	<u>3%</u>	<u>33%</u>	<u>-0-</u>
Availability and quality of labor force	<u>34%</u>	<u>31%</u>	<u>8%</u>	<u>27%</u>	<u>-0-</u>
Wage rates	<u>25%</u>	<u>47%</u>	<u>3%</u>	<u>25%</u>	<u>-0-</u>
Employee training capabilities	<u>9%</u>	<u>33%</u>	<u>8%</u>	<u>48%</u>	<u>2%</u>
Energy reliability	<u>23%</u>	<u>23%</u>	<u>9%</u>	<u>42%</u>	<u>2%</u>
Energy costs	<u>11%</u>	<u>31%</u>	<u>6%</u>	<u>50%</u>	<u>2%</u>
Water quality, supply, and cost	<u>23%</u>	<u>25%</u>	<u>-0-</u>	<u>48%</u>	<u>3%</u>
Hazardous waste disposal	<u>5%</u>	<u>8%</u>	<u>9%</u>	<u>72%</u>	<u>6%</u>
Wastewater disposal	<u>5%</u>	<u>14%</u>	<u>3%</u>	<u>70%</u>	<u>8%</u>
Air carrier service	<u>27%</u>	<u>36%</u>	<u>5%</u>	<u>30%</u>	<u>3%</u>
Regional transit system	<u>8%</u>	<u>14%</u>	<u>8%</u>	<u>67%</u>	<u>3%</u>
Major highways and freeways	<u>73%</u>	<u>20%</u>	<u>-0-</u>	<u>5%</u>	<u>2%</u>
Employee commuting	<u>30%</u>	<u>30%</u>	<u>8%</u>	<u>28%</u>	<u>5%</u>
Housing availability and costs	<u>47%</u>	<u>27%</u>	<u>-0-</u>	<u>27%</u>	<u>-0-</u>
Quality of primary and secondary schools	<u>13%</u>	<u>22%</u>	<u>6%</u>	<u>59%</u>	<u>-0-</u>
College and university curriculum and resources	<u>23%</u>	<u>22%</u>	<u>5%</u>	<u>48%</u>	<u>2%</u>
Government/business relationships	<u>9%</u>	<u>20%</u>	<u>5%</u>	<u>64%</u>	<u>2%</u>
Public attitudes towards business growth	<u>13%</u>	<u>11%</u>	<u>6%</u>	<u>69%</u>	<u>2%</u>
Economic/social stability	<u>33%</u>	<u>27%</u>	<u>2%</u>	<u>36%</u>	<u>3%</u>
Recreational opportunities	<u>72%</u>	<u>11%</u>	<u>3%</u>	<u>13%</u>	<u>2%</u>
Geographic location	<u>53%</u>	<u>33%</u>	<u>10%</u>	<u>5%</u>	<u>-0-</u>
Overall quality of life	<u>45%</u>	<u>31%</u>	<u>3%</u>	<u>20%</u>	<u>-0-</u>



**SURVEY RESULTS OF RESPONDING FIRMS WHO HAVE CONSIDERED THE  
SACRAMENTO AREA AS A POTENTIAL LOCATION FOR A NEW PLANT SITE  
(TOTAL RESPONSES = 38)<sup>a</sup>**

Market Potential for the City of Sacramento. Based on knowledge you may have of the Sacramento area, how would you rate the City of Sacramento as a potential location for new or expanded facilities compared to other potential locations in the United States?

<u>Rating Factors</u>	(Percent of 38)				No Response
	<u>Good</u>	<u>Fair</u>	<u>Poor</u>	<u>Not Sure</u>	
Availability and quality of industrial sites	<u>37%</u>	<u>40%</u>	<u>8%</u>	<u>16%</u>	<u>-0-</u>
Reasonable site acquisition costs	<u>29%</u>	<u>42%</u>	<u>5%</u>	<u>21%</u>	<u>3%</u>
Availability and quality of labor force	<u>34%</u>	<u>39%</u>	<u>8%</u>	<u>18%</u>	<u>-0-</u>
Wage rates	<u>32%</u>	<u>47%</u>	<u>5%</u>	<u>16%</u>	<u>-0-</u>
Employee training capabilities	<u>18%</u>	<u>26%</u>	<u>13%</u>	<u>37%</u>	<u>5%</u>
Energy reliability	<u>24%</u>	<u>26%</u>	<u>11%</u>	<u>37%</u>	<u>3%</u>
Energy costs	<u>11%</u>	<u>29%</u>	<u>11%</u>	<u>47%</u>	<u>3%</u>
Water quality, supply, and cost	<u>21%</u>	<u>26%</u>	<u>3%</u>	<u>47%</u>	<u>3%</u>
Hazardous waste disposal	<u>5%</u>	<u>13%</u>	<u>8%</u>	<u>66%</u>	<u>8%</u>
Wastewater disposal	<u>8%</u>	<u>21%</u>	<u>3%</u>	<u>58%</u>	<u>11%</u>
Air carrier service	<u>32%</u>	<u>26%</u>	<u>11%</u>	<u>29%</u>	<u>3%</u>
Regional transit system	<u>11%</u>	<u>16%</u>	<u>8%</u>	<u>61%</u>	<u>5%</u>
Major highways and freeways	<u>71%</u>	<u>24%</u>	<u>-0-</u>	<u>5%</u>	<u>-0-</u>
Employee commuting	<u>34%</u>	<u>29%</u>	<u>11%</u>	<u>24%</u>	<u>3%</u>
Housing availability and costs	<u>53%</u>	<u>32%</u>	<u>-0-</u>	<u>16%</u>	<u>-0-</u>
Quality of primary and secondary schools	<u>11%</u>	<u>26%</u>	<u>11%</u>	<u>53%</u>	<u>-0-</u>
College and university curriculum and resources	<u>24%</u>	<u>29%</u>	<u>3%</u>	<u>45%</u>	<u>-0-</u>
Government/business relationships	<u>11%</u>	<u>26%</u>	<u>8%</u>	<u>55%</u>	<u>-0-</u>
Public attitudes towards business growth	<u>21%</u>	<u>16%</u>	<u>5%</u>	<u>55%</u>	<u>3%</u>
Economic/social stability	<u>32%</u>	<u>32%</u>	<u>3%</u>	<u>29%</u>	<u>5%</u>
Recreational opportunities	<u>71%</u>	<u>18%</u>	<u>3%</u>	<u>8%</u>	<u>-0-</u>
Geographic location	<u>66%</u>	<u>13%</u>	<u>16%</u>	<u>5%</u>	<u>-0-</u>
Overall quality of life	<u>50%</u>	<u>34%</u>	<u>3%</u>	<u>13%</u>	<u>-0-</u>

<sup>a</sup>Six of the 44 firms which have considered the Sacramento area did not respond to Question No. 16 of their survey.

APPENDIX E

SURVEY RESULTS OF MARKET ~~P~~POTENTIAL RATING OF THE CITY  
OF SACRAMENTO BY FIRMS WHO HAVE CONSIDERED THE SACRAMENTO AREA  
AS A POTENTIAL LOCATION FOR A NEW PLANT SITE  
(38 RESPONSES)

U.C. BERKELEY LIBRARIES



C124888419



